The Bradshawe Lecture

ON THE

DISTRIBUTION AND DURATION OF VISCERAL NEW GROWTHS.

Delivered at the Royal College of Physicians of London,

BY NORMAN MOORE, M.D., F.R.C.P.,

ASSISTANT PHYSICIAN AND LECTURER ON PATHOLOGICAL ANATOMY AT ST. BARTHOLOMEW'S HOSPITAL AND WARDEN OF ITS COLLEGE.

MR. PRESIDENT,—My first duty is to thank you for doing me the honour to appoint me to lecture on this occasion.

The subject which I have chosen is one on which nothing is to be learned in the medical treatises of ancient times. The Hippocratic writings show that the Greeks had observed that cancer sometimes affected internal organs, that it was a disease of adult life, and that in many cases the cancer continued to grow as long as the patient lived,[1] but they contain no rules for distinguishing this disease from similar conditions. The physicians of the middle ages were inclined to neglect observation, but they excelled in definition to such a degree that a reader who goes no further than the first paragraph of their statements on each disease will be inclined to think too well of their knowledge. Dr. John of Gaddesden was the most famous of English physicians before the foundation of this College, and his definition of cancer is: "Cancer est morbus maleficus, tumorem faciens cum duricie, vel ulcerationes faciens cum dolore et fetore et horribilitate."[2] But his further remarks show that in his time cancer was not exactly distinguished from other forms of tumour, of induration of tissues, and of ulceration. This defect continued for more than four centuries after the time of John of Gaddesden, though a vast collection of observations of new growths of all kinds was made by physicians throughout Europe in consequence of the active study of the morbid anatomy of the human body in its relations to clinical medicine, to normal anatomy, and to the anatomy of animals, which was in this country encouraged by your illustrious predecessor, Dr. Caius, and carried on by Harvey, Glisson, Lower, Willis, and many other Fellows of this College. The most famous of them in this part of medicine, Dr. Matthew Baillie, was a contemporary of more than one physician still living. His book, "The Morbid Anatomy of some of the most important parts of the Human Body," appeared in 1793, and received improvements from his hand till Oct. 1st, 1817, when he sent the fifth edition to the press. This admirable treatise, which is so full of precise and original accounts of what the author had himself seen that it can never become obsolete, contains many observations on new growths. It is easy for any pathologist to satisfy himself that Dr. Baillie was acquainted with the appearances of cancer of the œsophagus, stomach, and intestine, of the liver, of the pancreas, and of the bladder, with new growths of the thyroid gland, of the brain, of the lungs, of the ovary, of the peritoneum, and of the pericardium. He had made the observation that such new growths may infect the glands, for he says under the heading "Mesenteric Glands Cancerous" (p. 209): "When a portion of the intestinal canal becomes cancerous, some of the absorbent glands in the mesentery generally become affected with the same disease: this is in consequence of the matter of cancer being conveyed to these glands by absorbent vessels. The glands become enlarged in size, and are changed into hard masses, exhibiting a scirrhous or a cancerous structure." That the defect of definition of cancer from other conditions remained is, however, clear from what Dr. Baillie remarks on "large white tubercle of the liver (p. 231): "Hard white masses are sometimes found in the liver. They are often as large as a chestnut, but I have seen them both a good deal larger and smaller than this size. They are to be found near the surface of the liver in greater number than near the middle of its substance; two or three frequently lie contiguous to each other, with a considerable portion of the liver in a healthy state interposed between them and a cluster of similar tubercles. They consist of a firm opaque white substance, and are generally somewhat depressed or hollow upon their outer surface. The liver in this disease is frequently a good deal enlarged beyond its natural size.

The kind of tubercle which we have now described is much more rare than the other, and resembles more the ordinary appearance of scirrhus in other parts of the body. In one or two instances, however, I have observed a thick sort of pus lodged in this species of tubercle, resembling very much the pus from a scrofulous sore; and therefore I am rather disposed to think that this tubercle may be of a scrofulous nature, but no satisfactory opinion can be formed upon this single circumstance." These tubercles were what we should call masses of carcinoma or of sarcoma, and we can explain clearly how different are their nature and structure from those of scrofulous sores, to use Dr. Baillie's term. The first step towards the exact definition of the structure of cancer and other new growths was the observation of Leeuwenhoek, in 1674, that the epidermis consisted of minute scales placed side by side. In a letter to Oldenburg he says: "I mentioned that I could not otherwise perceive but that the scarf insensible skin consisted of small round scales, and declared my sense of the skin's fabric thus: that continually as it was worn away on the outside, it was supplied from beneath."[3]

I do not propose to take up your time with an account of the successive advances in our knowledge of the cellular structure of the skin and of other tissues of the body, and of the gradual abandonment of the word "epidermis" and growth of the use of Ruysch's word "epithelium," from Leeuwenhoek's description of the epidermis in 1674 to Waldeyer's enunciation in 1867 of the modern doctrine that carcinoma is a new growth originating in epithelium. But as it is on new growths originating in epithelium that most of my observations have been made, I will ask you at once to consider some well-ascertained facts in its structure and natural history.

An epithelium consists of a continuous surface of nucleated cells, sometimes flat and polyhedral, sometimes columnar in shape, and sometimes with intermediate forms, sometimes in one layer, and sometimes stratified. The cells appear under the microscope almost contiguous, and are held together by a very thin structureless interstitial cement substance. These cells are the descendants of those which at a very early period of life were formed first upon the outer surface of the animal as epiblast, and some of which afterwards as hypoblast came to line the inner surface of the animal. Their ancestors, the cells of the epiblast and of the hypoblast, having to cover a smaller area, were much fewer in number. They multiplied by division. This power their descendants in the adult epithelium inherit, and thus throughout life as some cells die, and are shed on the surface, fresh cells are formed and take their place. There is what may be called a regular rhythm of growth. If the epithelium is stratified, the cells of the lower layers divide and supply in regular order and interval of time the deficiencies of the superficial layer. If the epithelium is in one layer, similar lateral changes take place in regular rhythm. The cells of the epiblast and of the hypoblast have another peculiarity. Their series can dip down into the subjacent structures and there continue their growth. The epiblast by this kind of ingrowth forms the stomodeum, which in time becomes the cavity of the mouth, and the proctodeum, which becomes the rectum. The hypoblast has numerous ingrowths which become glands. These ingrowths are numerous and normal in both epiblast and hypoblast. Now and then they occur at irregular points, as when the epiblast dips in and becomes separated from its original surface and forms one of those dermoid cysts containing teeth and hair which so long confused the ideas of anatomists as to the development of the ovum. This power of ingrowth is not displayed normally after its adult condition is reached. Its cells then proceed to succeed one another in a definite rhythm and along a definite line. The powerful effect of heredity is illustrated by the regularity of their plane and direction of growth. Is it never interrupted? May we not regard a carcinoma as a simple interruption of this regular rhythm of growth? What the disturbing influence is we do not know. Probably it is

[1] Προρρήτικον, ii., 11. [2] Rosa Anglica, Venice, 1516, p. 125-6. [3] Phil. Trans., 1692-3.

not always the same. It seems certain that as regularity of growth is a hereditary quality of epithelial cells, so irregularity may also be inherited by some epithelial cells. Thus the cells of every primary carcinoma are normal epithelial cells growing inward instead of following their normal plane of growth. The stroma in which they are set cannot be considered as the representative of the very thin interstitial cement substance. It is in parts formed by subjacent tissue, carried in with the epithelium, just as the mesoblast in many normal curves follows the epiblast. In other parts it is formed by fresh connective tissue, the formation of which is due to the irritation set up by the epithelial ingrowth. The same method of explanation may be applied to many sarcomata, new growths originating in any of the tissues developed from the mesoblast. Such is the primary new growth. Others appear in distant parts of the body. Are they contemporaneous morbid alterations of the rhythm of cell growth, or are they the immediate descendants of the primary growth? As to settle this point is essential to the study of the distribution of new growths of the viscera, I shall shortly describe three cases which demonstrate what most pathologists would now admit—that the later growths are the descendants of the first growth.

A man aged thirty-seven, by occupation a chimney-sweep, was admitted into St. Bartholomew's Hospital under my care on Sept. 8th, 1883. He had had hæmoptysis for a month before admission, and thought that he had become short of breath in April, 1883. He had a pain in his chest which kept him awake at night. The cardiac impulse could not be felt, but the heart sounds were audible and normal. The breathing sounds were normal. On Sept. 24th a small swelling was observed to have appeared on his left clavicle. On Oct. 3rd his breathing was shorter, and the following were the physical signs in his chest: absolute dulness on the left back from the spine of the scapula downwards; just over the root of the left lung, and there only, bronchial breathing; in front a peculiar hyper-resonant note just below the left clavicle; elsewhere on the left side absolute dulness; right side normal. Three days later I had paracentesis performed, and twenty-seven ounces of clear serum were drawn off. The dyspnœa was but little relieved, and three days later the man died. The day afterwards I examined his body. The pericardium contained blood-stained fluid, and both its surfaces were infiltrated with a dense whitish new growth. At the root of the left lung the growth had invaded the main bronchus. The bronchial glands were infiltrated. There was a small nodule on the sixth left rib. Below the diaphragm the growth was only present in the supra-renal bodies. I examined the new growth microscopically in every part in which it occurred, and in all situations it had the same characters. It everywhere consisted of large oval or polyhedral nucleated cells contained in well-marked alveoli. Precisely such cells cover the surface of the pericardium. Obscurity of cardiac sounds was the first physical sign observed. It was followed by pleural effusion, due to the pressure of the growth as it extended from the pericardium into the lung. The growth on the clavicle was observed to begin to grow some time after the physical signs indicated a growth in the pericardium. Its structure was precisely the same as that of the pericardial growth. No such cells occur in the substance of the supra-renal body, yet the nodule of new growth there had precisely the same cellular appearance as that on the pericardium. I believe the growth to have been primary in the pericardium (1) because the physical signs indicated that new growth began there, (2) because the largest and densest mass of new growth was found involving the pericardium, and (3) because the form and arrangement of the cells of the new growth were identical with those of the normal endothelial cells of the pericardium. As to the growths on the clavicle in the lung and in the supra-renal body, their structure was the same as that of the pericardial growth. In the substance of the lung and in the supra-renal body and clavicle no cellular structure exists normally which is like the structure of the endothelium of the pericardium. The conclusion is obvious that these large polygonal cells grouped together in alveoli in the lung and in the supra-renal body are the descendants of the similar cells of the endothelium of the pericardium. The new growth, due in the pericardium to an alteration of the normal rhythm of growth of the pericardial cells, is in the supra-renal body and lung due to the transference from the pericardium of some of these cells. The pericardium is the mother country of these cells—the masses in the lungs and supra-renal bodies are colonies. I have heard, Sir, that in the midst of your professional labours you have been so wise as to give some of your time to philosophical studies, and I may therefore venture to remind you of a famous passage in which one of the greatest writers and philosophers which this country has produced points out how colonists when they emigrate carry with them to their new abode the part of the character of their original nation predominant at the time of their emigration. Some of the cells of the endocardium which is the seat of morbid growth are carried off by the circulation or in the lymph channels, and form colonies in a region of totally different structure, the supra-renal body, and there illustrate the principle laid down by Burke. They carry with them the power of developing fresh cells of the original form and the tendency prevalent when they left the pericardium for these cells to multiply in irregular groups, instead of in a single layer on an extended surface.

The second example, illustrating the relation of descent between a primary new growth and secondary new growths is afforded by a man aged forty-seven, who was first under my care as an out-patient, and afterwards in St. Bartholomew's Hospital, to which he was admitted on Aug. 25th, 1888. He died on Sept. 22nd in the same year. Three years and five months before his admission his right eye had been removed by operation for a new growth in it, which proved on examination to be a melanotic sarcoma, growing from the choroid membrane, and containing dark pigmented connective-tissue cells of the kind normally abundant in the capillary part of that membrane. In August, 1888, when I saw him first, he had a greatly enlarged liver. The socket of his right eye was empty and showed no sign of disease. His left eye was natural. After death the enlargement of his liver was proved to be due to its infiltration by numerous masses of new growth mainly consisting of dark pigmented connective-tissue cells, precisely resembling those of the capillary part of the choroid membrane, and wholly unlike any normal cellular structure of the liver. Some of the abdominal lymphatics and the kidneys contained similar masses of pigmented sarcoma. Neither kidneys nor lymphatics normally contain any such pigmented connective tissue. The conclusion is surely obvious that the abnormally growing but normally constructed pigmented connective-tissue cells of these masses in the liver, abdominal lymphatics, and kidneys were the descendants of the original new growth starting in the normal pigmented cells of the choroid. Their colonising ancestors had already left the original mass in 1885. The growth in such a case is sometimes said to recur in such and such a part after an operation for its removal, but the phrase is incorrect. It does not recur. It began in the choroid, and thence started pigmented cells, which were already on their way to other regions when the original growth was extirpated in the eye. It was truly extirpated, for no morbid change except atrophy of the root of the right optic nerve was discoverable in the head. If I may again borrow an illustration from history, I would compare the melanotic growth in the liver—surviving and flourishing long after the destruction of the original seat of its cells in the choroid—to the Parsi community of Bombay, which preserves in a colony the race and beliefs of a Persian empire destroyed centuries ago by the Mussulman armies.

A third example of the relation of the secondary nodules of a new growth to the primary new growth is that of a man aged fifty-two, who was a patient of Dr. Gee in St. Bartholomew's Hospital, and whom I had the opportunity of observing in the wards and in the post-mortem room. He died of carcinoma of the uppermost part of the rectum growing from the epithelium lining the small crypt-like glands of the mucous membrane. The epithelial cells of these glands are columnar, and they arrange themselves in conformity with the shape of the glands in circular or ovoid tubules. The primary growth had infiltrated the submucous tissue, and consisted entirely of perfectly and imperfectly developed columnar epithelium, arranged exactly as is the normal epithelium of the tubular glands of this part of the rectum. Before death several nodules had grown so as to be felt on the surface of the liver through the abdominal wall. After death many such were found in both lobes of the liver. These masses in microscopic sections showed the columnar cells and tubular arrangements which I have already described as found in the new growth in the rectum. Just as the cells like those of the pericardial endothelium found forming a mass in the supra-renal body, and as the pigmented cells of the choroid kind

found in masses in the liver, are, from their resemblance to those of their original seat and dissimilarity to any cells of the organ in which they were found, believed to be secondary and descended growths, so these columnar epithelial cells arranged in tubules occurring in the liver are to be regarded as secondary to and descended from the primary abnormal growth of the normal columnar epithelium of the tubular glands of the rectum.

It would be easy to multiply examples. I have chosen these three because in each case the clinical history pointed to the new growth having begun in a particular region, and because the microscopic character of the cells of the region of origin were well marked, peculiar, and unmistakable. I wish these examples to illustrate the law that malignant new growths have a primary seat in which the abnormal growth of normal epithelial cells begins, and that the cells of all secondary growths are descended from these. The microscopic characters alone are, however, not always, as they were in these three cases, sufficient, when studied with the clinical history, to establish after death the position of the primary growth. When these, taken together, leave the determination of the primary growth uncertain, it may be usually settled by a consideration of the naked-eye characteristics of the several parts of the growth. If the growth has been comparatively slow, then the densest mass is probably the oldest. If the growth has been rapid, then the oldest mass will probably be that which is softest, in which most degeneration has taken place. It is essential, in the investigation of this point, always to consider together these three circumstances — microscopic structure, naked-eye appearance, and clinical history. The growth into the substance of an organ of a carcinoma or sarcoma always gives rise to the formation of fresh connective tissue. When the growth is slow, much connective-tissue formation is present and the growth is dense. When the growth is rapid, but little connective tissue is formed. Bearing this in mind, the enlargement of lymphatics near the growth must not be taken as a proof that the new growth itself has begun in them; their enlargement is frequently due to simple inflammation. In the same way, it is important, by examining numerous microscopic sections, to guard against the error of mistaking the round cells of the inflammatory process, which are often very abundant round the growth, for the cellular structure of the growth itself. The extensive degeneration which often takes place in the epithelial cells of a new growth on the surface of a mucous membrane adds to the difficulty of determining the nature of the cellular structure of the new growth unless many sections are examined. In the new growths which I am about to mention I have endeavoured to avoid error due to these circumstances. In each case I have examined the body myself, and have observed both the distribution and the naked-eye appearances of the fresh new growth, and have afterwards examined several sections of the primary growth and of the several secondary growths. In nearly every case I have examined microscopically the secondary growth in all places of its occurrence, and I have always done so when the naked-eye appearances left any room for doubt as to whether what seemed a mass of new growth was really so. In a few instances where many organs were the seat of secondary deposit, and where nearly all were successfully examined, accident prevented the examination of some one secondary nodule. With this altogether unimportant exception, the statements as to the nature of the new growths which I shall mention are all based on full microscopical examination. Although for practical purposes we may often be quite sure of the nature, say, of a carcinoma of the œsophagus, still it seems desirable, in establishing sound premisses from which to deduce conclusions as to the distribution and duration of new growths, to deal with only those cases in which the precise nature of the growth has been determined by microscopic examination. My own contribution is a very small one; but if similar collections of observations are made, there will be in time a sufficient accumulation for certainty in these important points with regard to visceral new growths: the directions in which they tend to grow, and to what organs in each case they tend to distribute secondary growths from the primary mass, and the duration of this growth—a period of extreme interest, since, so far as the possibilities of our art are at present, we must admit that it is conterminous with the survival of the patient.

Following the strict method I have described, I have to lay before you the results of the examination of one hundred and twenty-three cases of new growths in the internal organs of the body. Most of my remarks have relation to new growths from epithelium, for of these cases one hundred and two were carcinomata and twenty-one sarcomata, among which I include growths from endothelium, though some of their characters are so distinct that it is well to keep for them the distinctive term "endotheliomata." As to terms, I may add that the term "scirrhus," which in Heberden and all earlier writers was applied to all growing indurations of tissue in soft parts, whether due to new growth or to the process we term "cirrhosis in the liver" and "sclerosis in the brain," has little value as a pathological term for a new growth. Hardness is a common character of widely different new growths, and some carcinomata are softer than some sarcomata. If the term "scirrhus" is still to continue, it ought to be used as a purely clinical expression for any dense and therefore slow-growing new growth. The terms "medullary" and "encephaloid" are open to the same objection, and as they are not useful in clinical observation it would be well if they could be allowed to drop out of use altogether. All three terms date from a time when the origin of new growths was unknown, and refer to points in their description which are not distinctive of their nature. Every new growth should now be described by mentioning the form of its cells and their arrangement in relation to one another or to any intervening tissue. The term "epithelioma" may also with advantage fall into disuse, since it has practically become a synonym for carcinoma. A new growth may become adherent to neighbouring structures and grow into them, and this may be termed "growth in continuity"; or it may give origin to the formation of masses in distant organs, when these are termed "secondary growths." It is of considerable importance to observe this distinction, and I shall do so in the account of visceral new growths to which I shall now proceed, beginning with the alimentary canal and its large glands—the liver and the pancreas, and going on to the lungs, heart, and pericardium, spleen and lymphatics, kidney and brain.

The *œsophagus* is a common seat of new growth in men, a very rare one in women. In fifteen cases which I examined I found that the new growth was in all a carcinoma. All had a well-marked stroma. In five the cells contained in the meshes of the stroma were some of them columnar, suggesting that the morbid epithelium in this case was that of the small mucous glands. In the other ten the cells were polyhedral, or rounded, and of flat appearance, and the morbid epithelium was clearly that which forms the general lining of the œsophagus. In none were there any cell nests, such as are common in cancer of the lip. In four cases the new growth extended from the lower end of the œsophagus into the stomach. In six there was a growth in continuity into one lung. The commonest seat of secondary growth was the liver, in which masses were found in seven out of fifteen cases. Secondary growths occurred in the lungs in five cases and in the heart in five. In four, growths were found in the kidneys; and in three of those in which there was growth in the heart there was also growth in the kidneys. The pancreas, spleen, and supra-renal body were were each affected in one case. The following conclusions are justified: (1) That in carcinoma of the œsophagus the new growth is rarely confined to the œsophagus; (2) that it may grow along the œsophagus into the stomach; (3) that it may grow directly into the lung, and that this is a frequent occurrence; (4) that it may grow directly into the mediastinal glands; (5) that it may, though rarely, infiltrate the dorsal vertebræ; and (6) that it is frequently associated with widespread secondary growths, of which the commonest seat is the liver, and that, after the liver, the lungs, heart, and kidneys are more often affected than any other viscera. It is worth while to point out, in addition, that the tendency of the new growth to cause adhesion of the œsophagus to the lung sometimes leads to perforation of the œsophagus, the passage of food into the lung, and the patient's death from gangrene of the lung, or from pneumonia, before actual infiltration of the lung by the new growth has taken place.

The *stomach* is a common seat of new growth in both sexes. In twenty-nine cases, eight in women and seventeen in men, which I examined microscopically, I found the new growth in all to be a carcinoma. Its stroma was always abundant. The cells in twenty-one of these cases were columnar and spheroidal, with intermediate forms, and probably originated in the layer of columnar cells which line the whole stomach, the pyloric glands, and the peptic

glands. In four cases the cells were polyhedral, resembling and probably growing from those which normally occur at the neck of the pyloric and of the peptic glands. Very great degeneration of many of the cells of the new growth was often present, and in a few cases there was copious hæmorrhage into its substance. In twenty-three out of the twenty-nine examples the new growth was densest at the pylorus, and had grown thence in the gastric wall towards the œsophagus, in eleven cases infiltrating the whole gastric wall. In three cases it was most dense, and radiated from what seemed to have been a simple gastric ulcer of long standing. In two the seat of new growth was the cardiac end, and in one the posterior wall only. In one case the growth, densest at the pylorus, had filled the whole gastric wall and extended a little way into the œsophagus. In one case a mass of new growth projected through the pyloric orifice, but in no case was the wall of the duodenum in the slightest degree affected. Growth from the stomach in continuity into the lymphatics along its edge occurred in seven cases, into the liver in four, into the diaphragm, omentum and mesentery, pancreas and transverse colon in two each, and into the œsophagus, ascending colon, spleen, vertebral column, and vena cava inferior in one each. Secondary growths occurred in the liver in fourteen, in remote lymphatics such as the lumbar glands in nine, in the pancreas in six, in the lungs in five, in the peritoneum generally in three, in the kidney in two, in the heart, spleen, and supra-renal in one each. In three cases only the growth did not extend anywhere beyond the stomach. The following conclusions are justified: (1) That carcinoma of the stomach generally grows from the pylorus towards the cardiac end of the cavity; (2) that the growth is rarely continued into the œsophagus, but more often than into the duodenum; (3) that in about one-fourth of the cases the growth extends directly into the lymphatics along one or both curvatures of the stomach, forming dense masses which may often be felt through the abdominal wall; (2) that after these lymphatics its most frequent seat of growth in continuity is the liver; (5) that it may also grow in continuity, though with less frequency than into the liver, into the diaphragm, omentum and mesentery, pancreas and transverse colon, and less often still into the ascending colon, spleen, vertebral column, and vena cava inferior; (6) that in two-thirds of the cases there are secondary growths, and that in one-third these are widespread, affecting one or more regions; (7) that the commonest seat of secondary growth is the liver, and next to it remote lymphatics, especially the glands in the hilum of the liver, the lumbar and mesenteric glands, and those of the mediastinum; (8) that after these the pancreas and lungs are most often the seat of secondary growth, and with nearly equal frequency; and (9) that secondary growths are rare, but may also occur (in the order of frequency) in the peritoneum generally and in the kidney, and least often, and with equal rarity, in the heart, spleen, and supra-renal bodies.

I have examined nine growths in the *colon*, of which four were in the ascending colon, two in the transverse, and three in the descending. As these are purely artificial divisions, I shall treat of the growths as one series. Three were in women, six in men. All were carcinomata. In eight the cells were distinctly columnar. In one, in which the stroma was very dense, I found no well-formed columnar cells, but only spheroidal cells. All had no doubt originated in the columnar-celled epithelium which lines the large intestine and its mucous glands. Two had grown in continuity into the duodenum, two into the abdominal wall, one into the ileum, one into the stomach, and one into the liver. In two, small lymphatics near the intestine contained new growth, but there was no general infiltration of the abdominal lymphatics. The only remote seat of secondary growth was the liver, and that in only one case. The conclusions justified are: (1) That carcinoma of the colon tends to spread by direct continuity, and may thus, according to its situation, penetrate the stomach, duodenum, ileum, or abdominal wall; and (2) that it rarely has secondary growths, and that when these occur they are commonest in neighbouring lymphatics, and may rarely be found in the liver.

New growths of the lower part of the *rectum* are commonly sent into the surgical wards of a hospital, and it thus happens that nearly all the cases I have examined are of the upper part. They are eight in number, three in women and five in men. All were examples of carcinoma; in six the cells were columnar, in two polyhedral, and in one I could find only spheroidal cells. The commonest origin of the cell growth was probably the epithelioma of the mucous glands. In the two cases with polyhedral cells the new growth was nearer the termination of the intestine, one just within the anus, the other a little higher. The one which most certainly belonged to the area of the proctodeum had as widely spread secondary growths as any, and had them abundantly in the lumbar glands, liver, and pancreas. The other with polyhedral cells had neither growth in continuity nor secondary deposit. The remainder had no growth in continuity, unless in one case in which the peritoneum was adherent over a very small area, and here I found none, though I suspected it. Five were without any external growth. In those which had secondary growths the lumbar glands were infiltrated in two, the liver in three, and the pancreas in one, in which both liver and lumbar glands were affected. Even on so small a series it is fair to point out: (1) That in carcinoma of the rectum a majority of the cases have neither growth in continuity nor secondary growths; (2) that the lumbar glands and the liver are the most frequent regions of secondary growth; and (3) that the pancreas is sometimes infiltrated. On reviewing the new growths of the alimentary canal, it is worth note: (1) That the stomach is a more frequent seat of new growth than the œsophagus, and the œsophagus than the colon, and that notwithstanding its greater length, and therefore greater area of epithelium, the small intestine is the least frequent of all; (2) that new growths of the œsophagus lead to the most widespread secondary growths, and new growths of the colon to the least widespread; and (3) that new growths of the colon have the greatest tendency, perhaps owing to their situation, to grow directly into the other parts of the alimentary canal.

The *gall-bladder* and *large bile-ducts* are a seat of new growth in both sexes, and I have examined ten cases, five in each sex. All were examples of carcinoma. Polygonal and columnar cells, with intermediate spheroidal and subspheroidal forms, were present in all cases, corresponding exactly to the epithelial cells lining the ducts and the gall-bladder. In one case the common duct only was affected. In all the others the duct near the gall-bladder, and the upper part or the whole of the gall-bladder, were the seat of growth. Gall-stones were present in only four of the cases, and in a fifth a dead, partly calcified hydatid cyst occupied the fundus of the gall-bladder. In six of the cases the growth extended in continuity into the liver substance for a very short distance. In two it grew directly into the wall of the duodenum, and in one of these into the lumbar glands as well. Of secondary growths, the lymphatics were the most frequent seat, especially the glands in the hilum of the liver, the lumbar and the mesenteric glands. In only two cases was there wide general infiltration of the abdominal lymphatics. In three cases there were secondary growths in the lungs; in one only a separate secondary growth in the liver. In one a scattered growth in the peritoneum. In two cases there was no growth anywhere else. The following conclusions may be stated: (1) That carcinoma of the gall-bladder and large bile-ducts (generally the common duct) usually grows directly into the liver; (2) that secondary deposits, if present, are not widespread; (3) that their most frequent seat is the abdominal lymphatics, but that they may occur, in order of frequency, in the lungs, the liver, and the peritoneum.

The *liver* is a rare seat of primary new growth. I have examined three, two of them in men. All three were examples of carcinoma. Two had large polyhedral cells, which were jaundiced (though there was no general jaundice), and the third had polyhedral and columnar cells. Those with only polyhedral cells may have begun in the ultimate termination of the bile-ducts or in the liver-cells, the one with some columnar cells a little lower down in the bile-ducts. In one case the growth had extended in continuity into the omentum. There were no secondary growths except in the nearest lymphatics, and in a lymphatic on the external surface of the pericardium.

Primary new growth in the *pancreas* occurs in both sexes. Of eleven cases which I have examined, six were in men, five in women. All were examples of carcinoma, with spheroidal and columnar cells closely resembling those of the gland. Growth in continuity into the stomach, gall-bladder, and transverse colon was present in one case, and into the duodenum in another, and in a third into the lymphatics in the hilum of the liver. There were secondary

growths in seven cases; in the most widespread example in five separate localities. Next to the neighbouring lymphatics the liver was the most frequent seat, and was infiltrated in six cases, the lungs and the kidney in two, and the peritoneum and heart in one each. The conclusions are: (1) That in carcinoma of the pancreas growth in continuity is rare, but may take place into the stomach, gall-bladder, transverse colon, or duodenum; (2) that secondary growths are not usually widespread, and that their commonest seat is the liver; and (3) that they may also occur in the lungs, kidney, peritoneum, and heart. It is worth mention that jaundice was present in all the cases but one.

Primary new growth in the *lungs* may be a carcinoma or a sarcoma. I have examined eleven, ten of them in men. In all, the new growth formed a dense whitish mass, thickest about the root of the lung. In three the growth was a sarcoma, consisting of densely packed round cells, without any stroma, and probably growing from the lymphatic glands at the root of the lung. The other eight were carcinomata, with dense stroma, and columnar or spheroidal cells. In these the new growth probably originated in the epithelium of the mucous glands of the bronchi. In the three sarcomata there was growth in continuity into the bronchial glands, and in one case into the right auricle. The secondary growths were into the liver and pancreas in two cases, into the brain and supra-renal in one each, and in one into the vertebral column. The distribution of the carcinomata was similar. One grew in continuity into the right auricle; one had penetrated several ribs; one had secondary growths in the brain. There were secondary growths in the pancreas in half the cases; into remote lymphatics in three; into the liver in two; into the supra-renal, kidney, and spleen in one each. In one case only the growth was confined to one lung, and the bronchial glands were not infiltrated. One of the cases illustrated the necessity for minute examination of all details in the investigation of new growths. The patient had sudden right hemiplegia shortly before and up to her death. It seemed probable that a secondary growth had appeared in the brain, as sometimes happens both in carcinoma and in sarcoma of the lung. At the post-mortem examination I found an embolus plugging the left middle cerebral artery, and microscopic sections of this embolus showed it to consist of blood-clot only. The fact that a secondary growth may occur in the brain, in new growth in the lung, deserves notice, and the possibility of direct growth into the heart is also remarkable.

All the primary new growths of the *heart* and *pericardium* (only five in number) which I have examined proved to be endotheliomata, consisting of large polyhedral cells, arranged in well-marked stroma, and so exactly resembling the cells which line the pericardium that there could be no doubt that they were the origin of the growth. Both surfaces of the pericardium were infiltrated. In one of the cases the growth extended to the endocardium. In three there was a continuous growth into one or both lungs. In all but one case secondary growths were widespread. In all, the mediastinal lymphatics were infiltrated, and in two the lumbar glands. In three there were secondary nodules in the lungs; in two there were nodules in the liver, in two in the spleen, in two in the pancreas, in two in both kidneys, and in two in both supra-renals. In two cases there was a secondary growth on a clavicle. It is perhaps not safe to adopt more than two conclusions: (1) That endothelioma of the pericardium may grow directly into the lung; and (2) that its secondary deposits are usually widespread, and may include the liver, pancreas, spleen, kidney, and supra-renal body.

I have seen but one case of new growth primary in the *spleen*. It was a sarcoma of mixed cells, round and elongated without any stroma, and it grew directly into the stomach, diaphragm, and abdominal lymphatics, without any secondary growths.

Two cases of sarcoma primary in the *lymphatics* may be mentioned here. The new growth consisted of small round cells grouped in the meshes of a connective tissue, and was of the variety known as a lympho-sarcoma. It grew in continuity into the outer part of the pericardium in one case and into the right lung in the other. There were no remote growths, except a small nodule in the right lung in the example in which the pericardium was infiltrated.

I have only examined four cases of primary new growth in the *kidney*. Three in adults—two men and one woman—were carcinomata, consisting of spheroidal cells arranged in a well-marked stroma, and in one case in circular alveoli like tubules. One was a sarcoma growing from the pelvis of the kidney in a child aged two years and a half; in this case there were no secondary growths. In all the cases one kidney only was affected. The only growth in continuity was in one carcinoma, and was into the right supra-renal body. In two of the carcinomata there were growths into both lungs and into the liver, and in these cases the lumbar glands were also infiltrated. In the third carcinoma, that with the tubular arrangement of cells, the growth was confined to the left kidney. In two of the cases a ragged calculus occupied the pelvis of the kidney. It deserves note that while in new growth of the heart, whether primary endothelioma or secondary carcinoma, the kidney is sometimes affected; in none of these four cases of new growth in the kidney was the heart affected.

I have examined six cases of primary growth in the *brain*. All were growths of the genus "sarcoma." Three were in the cerebellum, one in the pons Varolii, one in the left cerebral hemisphere, and one in the optic chiasma. In only one was there any secondary growth except in the brain itself, where in two cases there were several. The extra-cerebral secondary growth in this one case was in the right supra-renal body.

I have now mentioned one hundred and fourteen examples of various new growths. In none of these were there any secondary growths in the uterus, ovaries, or testes. I have not accumulated sufficient observations on new growths of the generative system to enter upon that part of the subject. It is, moreover, one in which the difficulty of determining precisely the primary growth and its nature is often very great, owing to the rapid and extensive degeneration which often takes place. I have also omitted, as requiring larger discussion than this lecture permits, cases of widely spread and rapidly growing sarcoma in children, sometimes involving the skeleton, and sometimes almost all tissues but the bones. It remains to consider the duration of the new growths I have described. In each case I have taken from my own note-book when I had seen the patient during life, and from the careful records written from day to day by the house physicians at St. Bartholomew's Hospital, when I had not, the date of the first unequivocal symptom of new growth—as, for example, in cancer of the œsophagus, dysphagia; in cancer of the pancreas, jaundice. This clearly does not indicate the beginning of the disease, but it does mark the commencement of its distinct symptoms, and generally the time at which a physician is first likely to see it. In some of the cases I was unable to determine the duration. I shall mention the longest duration I could make out, and the shortest duration, and the duration of the majority of cases.

In carcinoma of the *œsophagus*, the majority of cases terminated within eight months, the longest case lasted thirteen months, and the shortest two months. In carcinoma of the *stomach* the majority of cases (in both sexes) lasted more than nine months, and half the cases from nine to eighteen months. The evidence seemed conclusive that one case (the longest) lasted sixty months and another thirty-six months; but these were the only ones which exceeded eighteen months. The shortest case lasted four months, and nearly a quarter of the cases lasted less than six months. In carcinoma of the *colon* the majority of cases lasted from ten months to nineteen months, which was the longest duration, and the shortest duration was four months. In cancer of the *rectum* the majority of cases lasted from four months to six months. The longest duration was thirteen months, the shortest three months. The duration of the three cases of cancer of the *liver* was respectively ten, seven, and five months. In cancer of the *pancreas* the majority of cases lasted from five to seven months; the longest lasted twelve months, and the shortest five weeks. In carcinoma of the *lung* a majority of cases lasted from seven to nine months, which was the longest duration; the shortest duration was three months. In the three cases of sarcoma of the lung the duration was respectively twelve months, ten months, and five months. In endothelioma of the *heart* and *pericardium* I could not satisfactorily determine the duration in most of the cases. In two which I observed throughout it was about six months. In the single case of sarcoma of the *spleen* the patient was under my own observation, and his illness lasted seven months. The two cases of lympho-sarcomata of the *lymphatics* each lasted two months. In carcinoma of the *kidney* the longest duration was nine months, the shortest six months. In the

sarcomata of the *brain* the duration of the majority of cases was from one to three months—the longest duration; and the shortest duration was four weeks. The large majority of cases of new growth in the viscera thus seem to terminate within a year from the appearance of distinct symptoms. In some cases, a period of doubtful health preceded the onset of undoubted illness, but this period I found so difficult to define that, as a safer assistance in determining the true duration of growth, I have drawn up a table of nine cases of what may be called external new growth (removed wholly or partially by operation). These show longer periods of time. Seven of them were cancers of the breast. A majority of the patients lived for from twenty-four to fifty-one months, and the shortest duration recorded was fifteen months. A man whose eye had been removed for melanotic sarcoma lived for forty-two months. The secondary growths in all the cases of carcinoma were widely distributed. Out of seven, the liver was infiltrated in five, the lung in four, the kidney in three, the spleen in two, and the heart, thyroid, and brain in one each. If it be supposed that after the operation only a very few morbid epithelial cells remained in the body, we have here a measure of how long they take to grow to a wide distribution—a period ranging from fifteen to fifty-one months. The intermediate durations are sufficiently near to make the mean a useful quantity. It is very nearly twenty-six months; or, omitting the single case of fifty-one months, somewhat more than twenty-one months. If this period be added to that determined by the symptoms, it seems likely that it may give an approximation to the true duration of the disease. For practical purposes, however, the determination of the observable period is far more important, and in every inquiry which we make as physicians practical usefulness to sick men ought to be our chief aim.

I hope that the observations recorded in this lecture, and the conclusions based upon them, are likely to be of use in diagnosis, as aiding in determining the probable situation and nature of internal new growths; in therapeutics, since treatment can only be safely based on an accurate diagnosis; and most, perhaps, in prognosis. In the Hippocratic writings, prognosis not only means the prediction of the event, but the prevision of the course of a disease and of all the probable incidents and opportunities of treatment likely to occur. I have tried to make this lecture a contribution to prognosis in this wider sense. The prognosis of our day is better than that of the Greeks, for it includes among its premisses the sure observations of morbid anatomy, and if Hippocrates could survey the practice of medicine as it now exists, I do not doubt that he would adhere to the opinion he expressed so many ages ago—that the most important thing for a physician is that he should practise forethought, and always have before his mind what has happened, what is happening, and what will happen in the case which he is treating. *Τὸν ἰητρὸν δοκέει μοι ἄριστον εἶναι πρόνοιαν ἐπιτηδεύειν.*

THE "PERFECTED" EVACUATOR.

By FESSENDEN N. OTIS, M.D.,

CLINICAL PROFESSOR OF GENITO-URINARY DISEASES IN THE COLLEGE OF PHYSICIANS AND SURGEONS, NEW YORK, ETC.

THE credit of conceiving and carrying to ultimate success the operation of removing stone from the bladder by lithotrity at a single sitting is indisputably due to Professor Henry J. Bigelow of Boston. The method of crushing the stone has not materially changed from that pursued in former times, although we are indebted also to Professor Bigelow for more powerful lithotrites. These at once became a necessity when attacking the large and hard stones, which the field of his brilliant operation quickly embraced. With the heavier instruments now available it is rare indeed to find a stone which in skilled hands is beyond their compass. After the ability to use large evacuating tubes (from 25 mm. to 30 mm. in circumference, and even larger) was demonstrated, the evacuation of the débris seemed easy of accomplishment. The first instrument, a modification of Clover's, devised by Professor Bigelow, answered the purpose admirably in the main, but was soon found to permit a return to the bladder of a portion of the débris after it had been deposited in the receiver—a fault which did not prevent the accomplishment of many notable successes by this method; but Professor Bigelow at once began a series of elaborate and expensive experiments to remove the difficulty. Sir Henry Thompson of London, who soon adopted Professor Bigelow's operation, and contrived instruments of his own for its accomplishment, found the same difficulty to contend with. A sharp rivalry between these distinguished surgeons—to construct an evacuator which should act by the most direct and shortest route, and yet perfectly prevent the return of débris to the bladder—began in 1879, and for the several succeeding years furnished to the journals (chiefly the London LANCET) many interesting illustrations and much animated discussion. After various modifications and expedients had been adopted and discarded during a period of several years, Professor Bigelow, in 1883, presented the instrument, which has remained from that time up to the present (1889) without modification. In presenting his improved instrument to the profession in THE LANCET of Jan. 6th, 1883, Professor Bigelow says: "However otherwise arranged, a satisfactory aspirator should have some device near the catheter to act as a trap for débris, and secure every fragment that has passed it. The chief difference among evacuators now is in the certainty with which they retain the fragments they have aspirated. Any instrument will draw out the fragments, but few hold them securely, for the débris does not always fall into the glass receiver, nor does it always remain in it; on the contrary, it is easily carried back into the bladder. This defect in the action of the evacuator has received little attention from surgeons, although it is the only point connected with the instrument which offers any difficulty whatever. Until recently it has been remedied only by sacrificing simplicity in the apparatus."

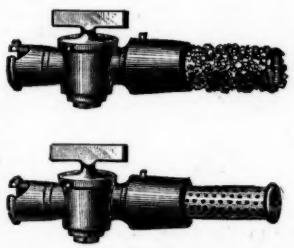
FIG. 1.

Professor Bigelow's latest evacuator (1883). Holds 10½ oz. Weighs 24 oz. (troy) empty, 34½ oz. filled.

In the latest instrument of Professor Bigelow (Fig. 1) the route to the bladder has been changed to correspond with that of Sir Henry Thompson, in which the evacuating tube was attached directly to the evacuator, without the intervention of tubing, as in Professor Bigelow's previous instruments, thus apparently giving both surgeons the advantage of the same and the shortest route to the bladder. In place of various contrivances, ball, valves, traps, and strainer of previous modifications, a perforated tube was inserted into the lower side of the rubber bulb, and continuous with a stopcock connected directly with the evacuating catheter. This perforated tube or strainer was claimed to

prevent effectually the return of débris into the bladder; and, in operation, it was proved to do so; but the strainer, while working perfectly in experiments with crushed coal or coral, when in practical use quickly became so clogged with mucus and coagulated blood that the frequent cleansing of the strainer during operation became necessary. This fact led Sir Henry Thompson to say, in THE LANCET (1883), that "all the perforated tubes and strainers get so blocked with débris (as I found long since) in the human bladder—not with coal in water—as to be practically useless there." As Professor Bigelow had, in THE LANCET of Jan. 6th, 1883, presented a large-sized woodcut illustrative of the absolute inability of Sir Henry Thompson's then latest instrument to prevent the return of débris to the bladder, with ample descriptive text, it might be suggested that his opinions of perforated tubes and strainers had been somewhat modified by personal feeling. The accompanying accurate copy of a photograph of the perforated tube or strainer of Professor Bigelow's improved evacuator, taken at the close of an operation at St. Luke's Hospital not long since, will, however, go far to justify Sir Henry Thompson's statement. (Fig. 2.)

FIG. 2.



Showing tube blocked with mucus and coagulated blood.

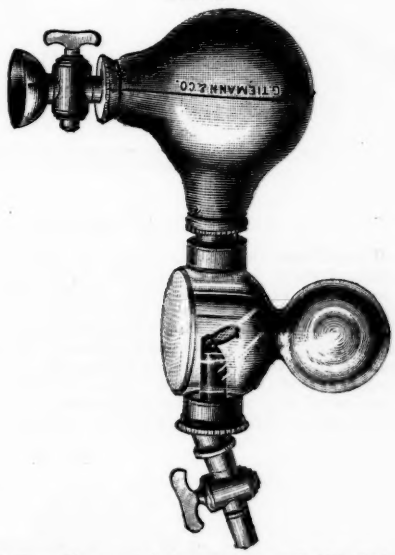
In cases free from mucus and pus, and perfectly free from any admixture of blood with the water during operation, there will not be any noteworthy difficulty; but if there is a trace of blood present in the progress of the procedure, the perforated tube will inevitably and promptly become blocked, as in Fig. 2. The instrument was a good one for practical purposes before the addition of the perforated tube; but it was open to the objection, as shown, that débris was likely to be left in the bladder after operations with it. Save under very favourable conditions, or by the frequent cleansing during operation, the objection evidently remains.

Sir Henry Thompson's experiments and modifications finally culminated in an evacuator which equally in action prevented the return of débris, without being open to the objections made against Professor Bigelow's instrument. This improved aspirator was presented in the London LANCET of April 12th, 1884. (Fig. 3.) "The improvement consists in a light, loosely-hanging valve of fine wire attached by a simple hinge to the end of the evacuating tube, which terminates within the glass trap of the instrument. When pressure is made on the indiarubber globe, and the current flows by the evacuating catheter into the bladder, this light valve is driven close to the aperture, and no débris can leave the glass trap. When the pressure is removed, and the current returns from the bladder, the valve floats widely open, and permits the débris to enter unchecked. The wire valve is circular in form, and its border, being flat and thin and about the tenth of an inch wide, is delicately sensitive to the movements of the current, and responds to the slightest impulse of the hand on the indiarubber globe." "But," Sir Henry Thompson further remarks, "I am quite satisfied that with my last published aspirator (the one so elaborately criticised by Professor Bigelow in THE LANCET of Jan. 6th, 1883), as well as with the form now described, no débris returns to the bladder if the instrument is properly used, when, of course, the valve is unnecessary. Few persons are aware that very slight but quickly-made pressure on the globe, sufficing to transmit only six or eight drachms of fluid into the bladder, generally removes more débris than a powerful impulse which transmits at one act all the fluid contents of the globe, or nearly so. When employed in the manner last named the valve becomes useful, and only then is it required."

At the commencement of the evacuator contest I was using very satisfactorily the original Bigelow instrument, and was, at the time of the notable discussion at the London International Congress of 1881, under the impression that it was the best then in use. During that discussion, Sir Henry Thompson accorded to me a fair share of the honour of contributing something towards the ultimate success of the operation of removal of vesical calculi at a single sitting. My distinguished countryman, Professor Bigelow, however, neglected to give me the credit of the previous discovery of the normal urethral calibre, through which alone the rapid evacuation became possible. Not desiring to assert my claim as a grievance, I determined, if possible, to invent another evacuator, and, in describing it, to write the history of evacuators in general; in this I proposed, while according honour where honour was due, to take what I believed to be my legitimate place in the preliminary history of litholapaxy.

Two years afterwards—viz., in November, 1883—I presented and demonstrated my first evacuator at a meeting of the New York Academy of Medicine, and read a paper in

FIG. 3.



Sir Henry Thompson's instrument (improved), 1889. Weighs 27½ oz. troy empty, 40 oz. filled.

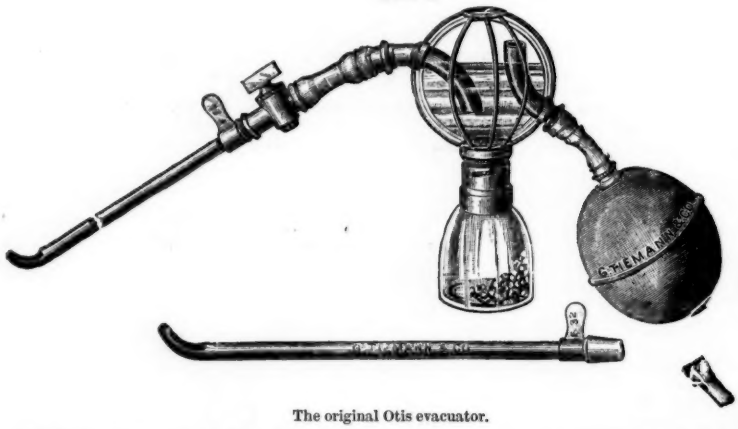
which "the removal of débris from the bladder after lithotrity" was fully considered, with representations of previous instruments which had been in use for that purpose, adding those of my own, and in which, while it was distinctly shown that Professor Bigelow did not discover the increased capacity of the urethra, which alone made his operation possible, and also that he did not discover the tolerance of the bladder to prolonged instrumental interference, yet, as I there claimed, "he did much more—he utilised the knowledge which he, in common with other surgeons, possessed. He had the inspiration to conceive of its value as a factor in a great life-saving operation. He seized my demonstration of an average urethral calibre of 32 mm. in circumference. He joined it with his knowledge of the toleration of the bladder to legitimate surgical procedures, and litholapaxy was born. He had the courage, the surgical knowledge, the skill, the inventive mechanical genius, and the perseverance to carry it, *vi et armis*, to a successful maturity, thus finally achieving one of the most brilliant surgical triumphs of modern times."

My own instrument was constructed on an entirely different plan from those of both Professor Bigelow and Sir Henry Thompson. Having appreciated the difficulties of overcoming the alleged faults of both, I endeavoured to accomplish evacuation without return of the débris, independently of traps, valves, or strainers. This was effected by a simple breaking of the currents to and from the bladder, so that the débris should be released *in transitu*, and drop

down into a receiver arranged to be a perfectly dead point. (Fig. 4.)

In its practical working it was found fully equal in its evacuating power to the improved instrument of Bigelow, with the advantage that, without trap or strainer, no débris was returned to the bladder. It was found, however, that under circumstances where during the operation it became desirable to introduce an additional amount of water into the bladder this could only be effected with considerable inconvenience, much greater than in Professor Bigelow's that a stopcock was not necessary to prevent the water from flowing from the evacuator, this being effected by atmospheric pressure alone in any position which the handling of the instrument required, and that only when laying it down was any water liable to run out. For use in this event a simple plug of hard rubber attached by a string was alone necessary. These important changes decreased the weight to such an extent that when filled my perfected evacuator weighed six ounces less than Professor Bigelow's when empty. The successful elimination of one stopcock, previously supposed to be the most important, and still absolutely essential in the instruments of both Prof. Bigelow and Sir Henry Thompson, directed attention to the possibility of getting rid of the remaining stopcock on the evacuating tube, which seemed desirable in order to prevent loss of water while attaching the evacuator to it after the crushing. It was ascertained in actual practice that, by changing the routine of operation a little, this stopcock was also wholly unnecessary. Instead of attaching the evacuator to the evacuating tube immediately upon its introduction into the bladder after crushing, the fluid was allowed to flow out, carrying with it all the fragments that could thus be washed out; then, deliberately attaching the evacuator to the tube, the desired amount of water for working the instrument easily, was introduced by means of the Davidson's syringe, which was connected with the rubber bulb. The syringe was then attached and the evacuation deliberately proceeded with. It was not found necessary to press the end of the evacuating tube to the extent of depressing the bladder floor so as to make the portion with which it is in contact the lowest point, as advised in using the evacuator of Professor Bigelow, but the current was sufficiently strong to draw out the débris if the tube was simply well introduced into the bladder cavity. Among the tests which were originally made to prove that the receiver was a perfectly dead point, and that fragments once deposited in it were thus entirely out of the influence of the currents passing to and fro during evacuation, was that of filling my evacuator completely as for ordinary use, then detaching the reservoir, emptying it, refilling it with glycerine, and then reconnecting it with the reservoir. A small quantity of crushed coral (which more nearly resembles vesical calculus than coal) was introduced into an ordinary soda-water bottle, and this was half filled with water to which a little ink had been added. On working the bulb, the fluid thus coloured was seen to pass back and forth through the reservoir, but not in the least mixing with the glycerine, while the coral was drawn out of the bladder in the inky current, and, receiving its impulse and direction from the discharge-pipe, was disengaged from the coloured medium and, dropping down through the clear glycerine, was deposited at the bottom of the receiver. This experiment, which proves in a striking manner the perfect retention of the débris in the receiver during evacuation, was subsequently found to work admirably in actual practice; and, in all operations for the last two years where blood was present in sufficient quantity to obscure the fluid, I have used glycerine with great satisfaction. Without it, it

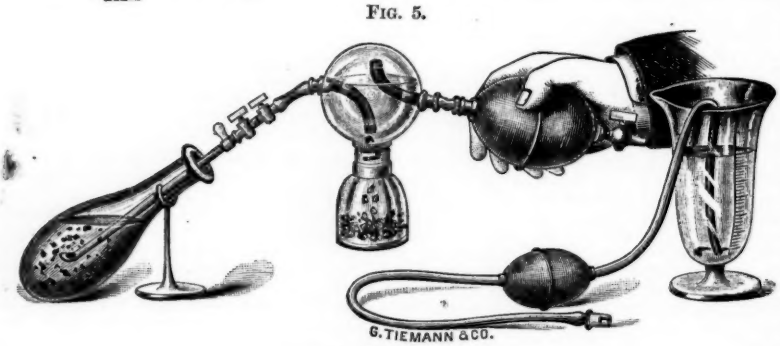
FIG. 4.



The original Otis evacuator.

or Sir Henry Thompson's instruments. In 1885, therefore, a tap and stopcock were added at the end of the rubber bulb, as shown in Fig. 5, so that, when it was found desirable to introduce additional water into the bladder, this was done with great ease by attaching the discharge pipe of the Davidson's syringe to a stopcock, while the supply end is immersed in a vessel (preferably a large glass graduate) filled with water at a proper temperature. The easy attachment and detachment of the Davidson's syringe allow any desired amount of fluid to be introduced into the bladder without delay or inconvenience. With this addition the instrument did most satisfactory service in my hands during the following two years. The only real embarrassment which was found in the use of this evacuator was from the weight and inconvenience of manipulation of the two stopcocks, which objection obtained equally in the instruments of Sir Henry Thompson and Professor Bigelow. At the suggestion of my son, Dr. Wm. K. Otis, who had noticed the greater lightness of the evacuator of Dr. Ultzmann of Vienna, I substituted hard rubber fittings similar to his; and in the course of experimentation which this change suggested, removal of all intermediate connexions between the glass reservoir, the rubber bulb, and the evacuating catheter was found to decrease the weight and add to the ease in handling the instrument. It was then discovered

FIG. 5.



The Otis evacuator, improved.

will occasionally be difficult, and sometimes impossible, to tell whether the evacuation of the débris is proceeding satisfactorily without disengaging and emptying the receiver.

The changes which have been made in the old instrument are as follows:—1. Removal of all stopcocks. 2. Removal of tubing between the bulb and globe, and between the globe and evacuating tube, thus making the instrument more compact and the distance from the bladder to the receiver the shortest possible. 3. Introduction of hard rubber in place of metal wherever possible, giving the utmost lightness. 4. Making the tube apertures in the globe oval instead of round (Dr. W. K. Otis's suggestion), and thus giving the greatest security against their fitting loosely and leaking. 5. Increasing the calibre of the evacuating tube where it enters the globe, thus securing a greater rapidity in delivery.

It is now claimed that this latest evacuator (Fig. 6) presents the following advantages over all other instruments now in use:—1. Perfect trapping of all fragments without the use of any form of valves, perforated tubes, or strainers. 2. Shortest possible route of fragments from the bladder to the receiver. 3. Absence of all stopcocks between the bladder and receiver. 4. Ease of filling and perfect control of the amount of water in the bladder during evacuation. 5. Lightness, compactness, power, and facility of manipulation. 6. The fragments being visible from the moment of leaving the tube until removed from the receiver, it can be seen that they do not return to the bladder.

FIG. 6.

The perfected Otis evacuator. Holds 8 oz. Weighs 10 oz. empty, 18 oz. filled.

I may state that the original Otis evacuator was manufactured by Messrs. George Tiemann and Co. (surgical instrument makers of New York), who with much pains and skill have aided me in the succeeding changes necessary to bring the instrument finally to its present state of perfection.

New York.

A STUDY ON LEPROSY:

BEING A SUMMARY OF OBSERVATIONS MADE DURING A RESIDENCE IN PALESTINE.[1]

BY DR. MAX SANDRECZKI,

DIRECTOR OF THE HOSPITAL FOR CHILDREN AT JERUSALEM.

Translated by EDWARD ATKINSON, *Honorary Surgeon to the General Infirmary at Leeds.*

AN article of such a nature as I here present to dermatologists, specialists, and philanthropists cannot pretend to be a scientific dissertation, or even a complete recital of all the phases which the horrible malady with which we are about to concern ourselves passes through. My aim is infinitely more modest. I desire, as simply as possible, to impart to my colleagues the observations and experiences which I have made during my residence in Palestine, and at the same time to gain the attention of both colleagues and philanthropists to the possibility there may be of combating with success the terrible scourge of leprosy.

The disease which bears the name of "leprosy" has been known from the most remote times. We find already in the Bible indications and data, more or less exact, of the leprosy called the "white,"[2] *morphœa*, *alba*, *mosaica*, and also of the leprosy named "tuberculous," nodosa, tuberculosa, mutilans,[3] also in Celsus,[4] and Pliny's Lucretia. Nowadays, one meets in Palestine and at Jerusalem (excepting only rare and isolated cases) with none but the tuberculous, mutilating leprosy, accompanied, according to the individual case, with anæsthesia or analgesia. Notwithstanding the total absence in Palestine of medical statistics, it is allowable to estimate at about 600 the number of lepers inhabiting the towns and villages of this country. At Jerusalem they live in common in a domicile assigned to them by the municipality. Immediately that symptoms of leprosy are apparent in a person he is promptly excluded from his village, separated from his family, and must go to the nearest town, in order to live on alms and on what his relatives bring to him. It happened formerly that some individuals suffering from another malady—e.g., from syphilis,—but accused by their enemies of being leprous, were doomed to expatriation. Such events no longer occur, because when a similar case arises the inculpated submits himself to examination by the doctors. There exists at Jerusalem a large hospice for lepers, founded under the auspices of the Moravian Brethren, and destined to collect together, if possible, all the lepers of the country, with the intention of bringing about the disappearance of this affection by means of a process of exclusion and isolation. The founders and patrons of this institute hope to attain their end, which, however, is rather philanthropic and religious than scientific. It is, at the same time, useful to draw attention to the fact that, as the Government has no intention to let these poor unfortunates be shut up, or to separate married people by force, this great establishment has but a very limited *clientèle*, amongst which there are also some syphilitic cases. As to my opinion, I am obliged to declare that the result of my researches gives me the conviction that leprosy is by no means contagious, and that consequently the exclusion and isolation of the patients is both a useless and a cruel measure. If leprosy were contagious in the sense in which one understands it, the staff of the above-named hospice, where men and women devote themselves to the care of the lepers, would be likely to suffer from this daily contact, dressing of wounds, washing of linen, &c. During the twenty-five years the hospice has existed not one of the *employés* has suffered either from any infection or any contagion whatever. Since the existence of this hospice, and by the example given to the public of not fearing the leprosy, lepers are permitted to enter the towns and the bazaars, and it has not been proved that there is any increase of leprosy. The same fact is pointed to in numerous places in the East, where leprosy ought to be followed by an excessive propagation among the lower classes if it were truly contagious. Eleven years ago I had

[1] "Étude sur la Lépre: résumé des Observations faites pendant un séjour en Palestine." Par le Dr. M. Sandreczki. Published in the "Revue Médico-Pharmaceutique," Constantinople, April 30th.

[2] 2 Kings v., 27; Exodus iv., 6; Numbers xii., 10; Leviticus xiii., &c.

[3] Deut. xxviii., 27. [4] Lib. iii., c. 25.

in my Children's Hospital, for four years, a leprous boy, and although he was always in contact with the other patients and domestics, and often with my own children and myself, there was never any contagion, even though there were always several other cases of leprosy with wounds in the hospital. Medical literature also tells us that there have been persons who have for long together lain in the same bed with the leprous, and have even cohabited with leprous women, to prove whether there were infection or contagion, and the result was negative. In Japan, lepers are free to live and to go where they will, and leprosy, instead of increasing, has even diminished, according to the report of Dr. Sissu, chief physician to the Prince of Satsuma, and of Professor Balz of the University of Tokio.

The heredity of leprosy is not constant; it sometimes appears to be in a manner intermittent—that is to say, neglecting one generation to appear again in the next. It is so among the lepers of Palestine. I have seen many children of lepers who were in no way tainted by the disease of their parents. Chinese physicians only admit one mode of propagation of the disease (*la voie héréditaire ou sexuelle*), but I have examined the wives of lepers in perfect health. Lepers whom I have questioned have assured me that inheritance is not constant, and they have told me that as soon as the leprosy is well developed procreation ceases. As everywhere else, hereditary propagation is difficult to prove, seeing that leprosy is only developed (as a rule) at the age of puberty. I have seen some cases at the age of five and six years. I have never seen it in the newly born. Dr. Zambaco of Constantinople tells us that leprosy shows itself even at birth. If children remain under bad hygienic conditions, which it is well known tend to produce leprosy, it is evident the disease might easily develop without being hereditary of necessity. As to persons favourable to the propagation of leprosy, I am in a position to state that in all Palestine, and especially in Jerusalem, I have never met with a single case among the inhabitants of towns, or of those who belong to the well-to-do classes. On the contrary, in China and Japan, in the Canaries and Sandwich Islands, even the rich are susceptible of becoming lepers. After the Crusades, in the middle ages, there were lepers even among the seigneurs.

Leprosy in Palestine is developed by insanitary conditions, of which I will enumerate the chief: impure air—the tainted exhalations which prevail in the villages and unhealthy habitations of the fellaheen; the water-supply, often stagnant and deteriorated; the oil and fat (used for food), rancid, or salted beyond measure; olives and cheese in a state of decomposition; meat rotten, or coming from animals diseased, or worse still. Add to all this extreme uncleanliness the utter absence of skin-action, and then one may easily explain derangements in the tissues of the skin, in the lymphatic and ganglionic systems, and, in a word, complete disorder of all the nutritive functions. The rapid changes of temperature in this country, the difference between the dryness of the day and the moisture and cold of the nights, necessarily affect the reciprocal action of the skin and of the lungs; but this and its interruption have not yet been sufficiently studied either by observation or experiment. I have, however, been able to prove, in a great number of lepers, the gradual and sometimes complete cessation of perspiration. Excess in venery, which the fellaheen practise, greatly augments, no doubt, their predisposition, by weakening the body. After numerous inquiries, I am of the opinion that chronic intermittent fever plays a part in the development of the disease. Chinese physicians, and Japanese also, mention that, besides the above-named causes, variability of climate is favourable to its evolution. Hindoo specialists also say as much. I have found it stated, in a report upon the lepra caspica, that the people who furnish the majority of candidates for leprosy suffer much from intermittent fever. Sweat contains various acids, urea, and many bacteria. If these excretions are retained by the want of perspiration, is it not probable that they would cause derangement of the tegumentary structures, and is it not remarkable that leprosy shows itself chiefly in those parts of the body which are most exposed to the air. To sum up, then, it must be concluded that leprosy is developed indigenously, spontaneously, under conditions and predispositions known and unknown, especially when there is general organic waste (*déchéance*) of an individual or of a people.

As to the possibility of cure, one may say without fear of contradiction that among adults it is excluded. Throughout the whole extent of the literature which I have studied upon this point I have only found a few isolated cases the authenticity of which seemed to me to be established. The historians of leprosy are in accord in saying that all measures of restraint, such as isolation, exclusion, forbidding to marry, and other cruelties, have not tended to the annihilation of leprosy. Whenever the disease has diminished or has disappeared, it is certainly hygiene and civilisation which have brought it about. If one might believe the sheiks of the villages (statistics again being unfortunately defective), leprosy even in Palestine is in course of receding under the influence of civilisation and of the amelioration of the general circumstances of the population. It is yet necessary to create for the people better conditions of existence, and to establish a sanitary regimen even in the smallest hamlets. Taking account of all these observations and of my own researches, I have arrived at the conclusion that leprosy is curable in children if it is taken in time—that is to say, when it begins to show itself. In order to be able to base my opinion upon a fact, I received into my Hospital for Children, and cared for, a young boy ten years of age attacked by leprosy and already in a somewhat advanced stage. Examination of this boy gave the following results: Colour of the face sickly brownish (*brunâtre malsaine*); the eyelids, nose, and ears tumid; tubercles, of sizes varying from a pea to a hazel-nut, on the forehead, nose, and eyelids, of which some were in a state of suppuration; the eyes weeping; nose running; palate and pharynx sprinkled with small tubercles, and slight points of ulceration; the breath malodorous; and, lastly, a hoarse and nasal voice. On the hands were contracted cicatrices caused by ulcers. His whole system was enfeebled. He suffered from intermittent fever, and did not perspire even when working in the greatest heat. Sensibility of the face, arms, and hands was much diminished, and he complained of severe deep pains in his arms and in his muscles. After a treatment which extended over a space of four years, the young man could be sent home cured. He now earns his living as a labourer, and lives with his parents. The treatment followed may be designated simply as *hygièno-tonique*, internal as well as external: mineral baths, exercise, gymnastics, work in the open air, without the use of any specific. The sheiks of his village recognised the young man as cured, and have satisfied themselves that the malady was arrested. Several of my European colleagues also are convinced of his cure. After the cure the perspiration was abundant, and the intermittent fever ceased.

A German specialist, Professor Staeser, has declared that he attaches no importance to hospices and prisons for lepers with a view to the annihilation of leprosy; but that, on the other hand, asylums for children have every chance of giving good results. A treatment like that of our leprous boy is naturally very expensive; it requires much patience, and lasts for years; however, it seems to me that, all considered, the result obtained balances the cost. If leprous children can be cured and remain healthy, the next generation will most likely be so also. But to advance securely it will be necessary to make repeated experiments, and certainly the subjects will not be wanting. Up to the present time I have received no subsidy or aid, either from the Ottoman Government or from the municipality, to place me in a position to treat other leprous children. My hospital, with 200 in-patients per annum, treated gratuitously, costs me enough already. These lines will perhaps have the effect of attracting the notice of some men of science or philanthropists to this interesting subject. I am obliged to confess that I have not had an opportunity of making a special study of the bacillus of leprosy. The discovery of the bacillus has not hitherto advanced the curing of leprosy. Neither the transmissibility nor the mode of propagation has been demonstrated. Unfortunately we are not permitted here to make dissections, and it is almost impossible to procure objects for the microscope. In conclusion, I would remark that if the bacilli cause leprosy and propagate it from one person to another, how can we explain the long latent period—the repose of the bacillus for years? Is it not probable that the human body, more and more degenerated by years of misery and by every sort of hurtful influence, becomes the soil favourable for the development and culture of the bacillus?

Leeds.

NOTE ON LEPROSY IN NORWAY AND THEIR SPECIAL HOSPITALS.

BY HERCULES MAC DONNELL, M.D.,
SURGEON TO THE COUNTY LOUTH INFIRMARY, DUNDALK, ETC.

HAVING just returned from visiting nearly all the leper hospitals in Norway, a few remarks concerning them may be of interest to the readers of THE LANCET. When I left, in June, the leper craze in England had assumed an acute form; when I returned, a month later, it had apparently died out. It is reported (whether truly or not I am unable to say) that an eminent member of the profession has started for the "land of the midnight sun," with the avowed object of collecting materials for an article in one of our leading monthly magazines on this savoury subject. To my mind, discussion on such subjects in the lay press is to be deprecated. If, however, the public crave such pabulum, it is well that it should be supplied by an eminent peripatetic vendor of such articles; but let us hope that we may be spared pen-and-ink sketches or photographs of the various phases of this loathsome affection.

Having arrived at Bergen on June 19th, Dr. Christie kindly appointed the next morning to show me round the Special Hospital and Asylum. The hospital is pleasantly situated about a mile and a half from the town, in close proximity to one of the general hospitals. There were sixty-two cases under treatment in various stages of the disease. The nursing seemed inefficient, the wards not over clean, and the patients had that peculiarly sad, downcast air which is always visible where large numbers of lepers are gathered together. In all the hospitals and asylums I visited, the physicians were thoroughly conversant with every detail relating to their special subject: not only treatment but pathology and statistics receive exhaustive care. The Government has gone to great pains and expense in publishing returns and maps with coloured areas showing the infected districts and the progress of the disease during decennial periods. By means of these maps the advance which hygiene and segregation have made in diminishing the disease can be traced with rapidity. In 1876 there were some 1300 lepers; the last return shows only 846. Dr. Christie is of opinion that about 10 per cent. of non-tubercular cases are curable. He has given up the gurjun-oil treatment, and relies mainly on the salicylates of soda and potass internally. Excoriated surfaces are treated generally with ointments containing salicylate of soda or iodoform, and solid nitrate of silver is used where fissures are deep and difficult to heal. I saw one remarkable case of elevated flat ulcer on the sole of an atrophied foot, which had resisted all treatment for a period of six months.

Dr. Christie then brought me to the Leper Asylum. It is an old building, with a curious chapel in the central courtyard dating from the fifteenth century. There being no isolation law in Norway, the authorities are unable to compel lepers to leave their homes. They are, however, forbidden to marry, and at certain central places—such as Bergen—asylums are open for their reception, where they are paid 40 ore (5½*d.*) daily. The inmates have to supply their own food out of this allowance; they have each a separate apartment, and are subject to few restrictions. In Bergen Asylum they are permitted to work, and, when not too ill, to vend their wares in the open market. Dr. Christie does not believe in the contagiousness of leprosy, and in Bergen it is quite common to see sufferers walking about and offering goods for sale. In other places—such as Molde—they do not allow lepers the same latitude of intercourse.

At Molde, Dr. Kaurin received me with the utmost courtesy—as, indeed, did all my Norwegian *confrères*. Nowhere did I perceive that any credence was attached to the fish-origin theory. Dr. Kaurin's writings on this special subject are widely known abroad. He has contributed some classical papers to the chief French work on leprosy, and his tabular statistics are most valuable. He holds more pronounced views on its contagiousness than those of his colleagues further south. He does not permit the sale of work, and lays much stress on the necessity of patients remaining a great deal in the open air and having ample ventilation in all wards and day rooms. The climate of Molde is not so severe in winter as Bergen or Trondhjem, and, though the district is one where leprosy is extremely prevalent, the result of semi-isolation and treatment is most encouraging. The hospital contained seventy-four patients. It is a fine building, with large and well-ventilated wards containing from three to nine beds, lofty corridors, and the kitchen and offices scrupulously clean. The entire hospital conveyed the impression of being well managed, that no necessary expense was spared, and that the patients were well cared for. Schooling and instruction in various ways are provided for such of the inmates as desire it. There is a bright well-lit chapel in the hospital, and the grounds for recreation are ample and well kept.

At Trondhjem, the Spedalsk Hospital is situated on a high plateau about two miles and a half from the town. At my visit there were seventy-eight patients under treatment. The building is large, having a long central corridor, off which the wards open. The wards are high and airy, but there was a most decided want of cleanliness throughout. The situation left nothing to be desired; but I cannot say I was impressed with the general arrangements. Much might be done at Trondhjem and Bergen to render the surroundings more cheerful and the lives of the inmates less irksome. There seemed to be a total absence of interest by the external world, and, in consequence, a daily routine dreary and depressing in the extreme.

The three places I have alluded to are the main centres for the treatment and semi-isolation of lepers in Norway. The steps which have been taken have proved most successful, and it is now merely a matter of time for the disease to be almost stamped out. All the specialists agree that hygiene carried out in the homes, with special attention to personal cleanliness and proper food, would hasten this desirable end; but amongst so democratic a people it is difficult to pass any law trenching on the liberty of the subject. The difficulty of inspection and the insistance on sanitary measures are wellnigh impossible, owing to the great distances patients live from centres of civilisation and the total interruption of all communication during the long winter months. The main factors in producing the disease (besides heredity) are filthy habits, bad food (mostly fish, salted or dried), the absence of sunlight for many months, foul air in stuffy and smoky cabins, insufficient heat and clothing, and the almost entire absence of green food or flesh meat. Compulsory isolation can alone deal rapidly with such a condition of things. The Storthing has been appealed to in vain by sanitary reformers for more stringent measures than prevail at present. The existing arrangements are slowly and gradually working a vast improvement. It is probable a time may come when they shall have accomplished all the improvement they are capable of effecting, and a residuum of cases will remain. When that times arrives, the sturdy common sense of the nation will insist on such further measures of restriction as may be necessary to stamp out completely the disease, for one and all are agreed that stamped out it must be.

Dundalk.

ON JOINT SCRAPING; WITH TABLE OF CASES TREATED.[1]

BY H. A. LEDIARD, F.R.C.S. ENG.,
SURGEON TO THE CUMBERLAND INFIRMARY.

ON Nov. 1st, 1882, a boy aged six came under my care at the Cumberland Infirmary with disease of the knee-joint. The case is recorded fully in the writing of Dr. Leith Waters, then house surgeon, and I give a brief abstract of it as an introduction to what is to follow on the subject of joint scraping. The knee was flexed and tender; a sinus existed on the outer side of the thigh, from which from half an ounce to an ounce of pus drained daily; a probe did not enter the joint. The boy was pale and emaciated. The disease was traced to an injury some six weeks previously. On Nov. 18th an ordinary semilunar incision was made as for excision of the joint through the patellar ligament, and the posterior part of the internal condyle of the femur was found softened and carious; it was

[1] Paper read before the Carlisle Medical Society, Dec. 13th, 1888.

scraped, the scraping of the softened tissue resulting in the formation of a hollow in the substance of the condyle; the crucial ligaments were softened and infiltrated, but the joint was otherwise in a fair state of health. The wound was stitched up and a back splint applied. At the end of March, 1883, the joint was put up in a stiff bandage, and the boy went home wonderfully changed in appearance for the better. The lad never came back as desired, but during August, 1887, I found him out, and heard that the joint had discharged for eighteen months after he got home, and then healed up. I found ankylosis present at a bad angle. The upshot of the surgical procedure in this case was a surprise to me. I had not intended to stop short of excision of the entire joint; but, finding the disease so localised, it seems that we determined at the time to try what scraping out the diseased part would do.

In the spring of 1887 I heard from Mr. H. W. Page, of St. Mary's Hospital, that a new method of dealing with joints was being tried. He called it "arthrectomy," the chief feature of the operation being that all disease, whether in synovial membrane, cartilage, or bone, was carefully removed with a sharp spoon, and it is entirely due to my conversation with Mr. Page on this subject that I am in a position to draw attention to joint scraping.

It appears to me that in the treatment of joint affections, as in the treatment of many surgical affections, efforts are being made to break away from the routine treatment of past years. Formerly amputation was then the only treatment for diseased joints; afterwards came excision. Short as has been the reign of excision, and hardly perfected in many of the needful appliances, we have been led to believe that excision has been resorted to too freely, and that rest follows the rule of a "complete removal of diseased parts" as essential to success in excision of the knee. Bleeding from the cut surfaces of the bones is sometimes very troublesome and difficult to arrest. Given an ordinary excision of the knee, with a moderate amount of bone removed, good position, and absence of much hæmorrhage, and yet the result is often amputation. This may in some instances be due to the entire disease not having been taken away; bone surfaces are perhaps clear, and much synovial gelatinous degeneration also cut away, but much that escapes the eye may be stitched up in the wound and lead to failure—at least, I am sure that it has been so with me. "All portions of diseased synovial structure that can be safely dissected off should be removed," said the late Mr. Spence, a remark which seems to imply a difficulty in dissecting everything away.

In the operation of scraping out a joint, the principle favoured by Mr. Bryant—viz., "the least sacrifice of parts"—is held in view, and as such should at least command the attention of all surgeons. Tedious as it may be to scrape out a large joint, hand-aching, and very dull to an onlooker, yet the saving of a limb is the goal to be kept in view. Taking the cases seriatim, I will glance at them as briefly as possible. (See accompanying table.)

1. Hannah B——, aged twenty. Knee diseased eight years. No sinus. On opening the joint, the cartilage was almost all gone, and the bone diseased throughout the joint. The case did well. I should add that the crucial ligaments were left. The patient can walk, though the knee is stiff. Osseous ankylosis is present, but there is no shortening. Patella left. (Exhibited to Society.)

2. Jane P——, aged three. Pus in knee-joint, with

Cases of Joint Scraping.

RECOVERIES.				AMPUTATIONS.					DEATHS.				
Date of Operation.	Name.	Age.	Joint.	Date of Operation.	Name.	Age.	Joint.	Date of Amputation.	Date of Operation.	Name.	Age.	Joint.	Date of Death.
Nov. 18, 1882.	John McA.	6	Knee.	Aug. 25, 1887.	Eliz. S.	9	Knee.	Aug. 17, 1888.	Nov. 28, 1887.	Tom J.	8	Hip.	Mar., 1886.
May 30, 1887.	Hannah B.	20	Knee.	Feb. 13, 1888.	Fred. G.	22	Knee.	June 6, 1888.	May 16, 1888.	Joseph T.	12	Hip.	Oct., 1888.
June 1, 1887.	Jane P.	3	Knee.	June 11, 1888.	Thomas H.	12	Ankle.	Sept. 12, 1888.	—	—	—	—	—
June 5, 1887.	Sarah J. B.	5	Ankle.	—	—	—	—	—	—	—	—	—	—
Aug. 29, 1887.	Mary J. G.	5	Knee.	—	—	—	—	—	—	—	—	—	—

Recoveries, 5; amputations, 3; deaths, 2—Total, 10.

and drainage are all that are necessary to cure many cases of diseased joints; this, I take it, is the outcome of Sir Joseph Lister's work. The last suggestion which has been put into practice seems to me a sort of compromise between excision and rest with drainage. The joint is to be laid open and the diseased parts cleared out, with a hope that ankylosis or perhaps even a movable joint may result; at any rate, excision of the diseased joint by a less severe method than that which succeeded amputation. In any case the movement is one which every surgeon will welcome, and it is one which will ultimately mark the last quarter of the nineteenth century.

First a word on the difficulties attending excision of the knee; for difficulties there are which have been recognised on all sides, or else why so much ingenuity displayed upon splints for use after operation? I cannot say how many methods I have seen, from Dr. P. H. Watson's plaster and iron rods to Mr. Morrant Baker's skewers for fixing the bones. The difficulty of fixing the ends of the femur and tibia and obtaining ankylosis in good position is due to the fact that excision thoroughly loosens the entire joint; frequently, in order to obtain good position, more bone is removed than is really needful—as where there is subluxation or semi-flexion. Sometimes several slices of bone require removal before the limb can be put on a back splint, and this means severance of all ligamentous attachment between the bones, lateral and posterior. For subluxated joints it is probable that the bones must still be sliced away, in many cases unnecessarily so far as the disease goes.

I venture to express an opinion that it is occasionally difficult to tell exactly where diseased tissues end and healthy begin, especially where bone is concerned; hence, rather than leave any doubtful tissue behind, the surgeon pulpy disease. Little or no change in cartilage. No sinus. The crucial ligaments were sacrificed during the scraping. The case did well, and osseous ankylosis at a slight angle resulted. Patella left.

3. The next case was an ankle. Mary J. B——, aged five. Entire ankle diseased, the joint being soft and swollen, with numerous sinuses, which discharged pus freely. The entire joint was scraped out, the astragalus included. The child was very strumous and weak. She ultimately did well, and had a sound joint, though the foot was much shortened. (Exhibited to Society.)

4. The next case was knee No. 3. Elizabeth S——, aged nine. The knee was subluxated, and had numerous sinuses. Limb attenuated. General health not broken down. On scraping, pulp and pus were present; cartilages destroyed; osseous surfaces soft; patella scraped away; crucial ligaments gone; femoral epiphyses scraped away. This case was in the balance for a long while, was finally amputated on Aug. 17th, 1888, and recovery resulted.

5. The next case was another knee. Mary Jane G—— (date Aug. 29th, 1887). No sinuses. Knee enlarged. The child was puny, and had spinal curvature. On scraping, pulpy disease was present; no pus; commencing ulceration of cartilage; bone subjacent red and soft; epiphysial cartilages exposed; one crucial ligament left standing. The case took a long time to recover, but did well. The child is paraplegic from spinal disease.

6. The next case was a hip in a delicate boy of eight years of age. There was a large abscess of the hip-joint; no sinus existed. The joint was scraped out. Head of femur soft; scraped away. Acetabulum scraped out. The case hung in the balance for some months, but death occurred

from brain disease in March, 1888. This was the first hip case operated on.

7. The seventh case was another knee. Frederick G——, aged twenty-two. The disease had existed eight years; no sinus. On scraping the joint I cut away the patella at once. Cartilages of joint diseased and loosened; underlying bone soft; crucial ligaments left. The case did not do well, and amputation was performed on June 6th, 1888.

8. The next case was the second hip operated on—an unfavourable one for any treatment. An abscess had been opened in the thigh, and the scraping was secondary to this by two months. The head and neck of the bone were scraped away, and the acetabulum scraped out. I thought it possible that it might even be perforated. The case did badly; abscesses formed repeatedly; high temperature was kept up, and death by hæmorrhage ended the case in October, 1888, five months after the scraping.

9. This case was the second ankle. Abscesses of the joint had been opened previously. The limb was wasted and the boy rather hectic. His age was twelve. The ankle-joint was filled with pulp and pus; the osseous parts were soft, and the cartilages gone. The astragalus in this case also was scraped away. The case did fairly for a time, but continued pain and failure to heal necessitated amputation on Sept. 12th, 1888, recovery ensuing. (Died later on with phthisis.)

I have thus operated on six knees, have lost no patients, but had to amputate two of them. I have operated on two ankles, one of which did well, and the other was amputated. I have had two unsuccessful and fatal cases of hip disease, where scraping was tried. These two cases would not have done well or better by ordinary excision, and were certainly unsuitable for hip amputation.

Evidences of failure after scraping will be found, clinically, in continuation of more or less elevation of the temperature, general failure of the patient's nutrition, persistence of pain on palpation of joint, and failure in obtaining a certain amount of ankylosis. Thus, the ankle scraped out on June 11th, 1888, was amputated on Sept. 12th following, the joint being as loose as a healthy joint, and perhaps looser. The temperature was always up during a part of the twenty-four hours. There were numerous discharging and unhealthy-looking sinuses; there was tenderness on pressure all over the joint; and the nutrition of the limb was declining. It is somewhat difficult to say when interference is called for in cases where scraping has been tried; but I think that six or eight weeks will probably show how matters are likely to turn out. It is true that I have one case which was not healed for a long time, but there was not that association of those evidences of failure which I have already alluded to. The gradual stiffening of the joint, absence of pain, a normal or nearly normal temperature, and an improved condition of general health are the symptoms which are to be looked for where success is to be expected.

If this method is proved to be of permanent value, and if the joints scraped out remain sound and good, the question arises naturally, to what joints is scraping limited? If the knee and the ankle are joints to which scraping can be applied, what about other joints which are so frequently diseased? It appears to me that at the elbow scraping would be followed by ankylosis, which would render the arm probably useless; and I question whether the free mobility obtained after excision of the elbow in the usual manner could ever be obtained by scraping. This is, however, an open question, and I have not as yet been tempted to scrape out an elbow joint. My two cases of hip disease are not encouraging, but I can say this, that the operations caused far less shock, hæmorrhage, and disturbance of parts than excision would have done. I am not sanguine that movement will be obtained even after partial scraping of a joint, and am inclined to think that ankylosis is the end to to be kept in view.

In conclusion, I desire to state distinctly that the number of cases operated is insufficient to justify any dogmatic assertion as to the future of scraping, but that, as a substitute for excision, it is very hopeful and worthy of trial; that the shock of the operation is not to be compared to that of excision; that the hæmorrhage is less than that of excision; the loosening of the joint is markedly less; the retentive apparatus necessary is but slight compared to that needful after excision; and the pain of dressing subsequently is trivial by comparison. In some instances where the surgeon is prepared to excise, he may, after the joint is exposed, find that the disease is limited to one part of the joint, as in the first case I treated by scraping, and if this is so the case may be conducted to a happy issue without subjecting the patient to the greater risk of entire excision of the joint.

Carlisle.

FULMINATING PYO-HÆMOTHORAX IN AN INFANT AGED EIGHT MONTHS.

By ANGEL MONEY, M.D., F.R.C.P.,
ASSISTANT PHYSICIAN TO UNIVERSITY COLLEGE HOSPITAL AND TO THE HOSPITAL FOR SICK CHILDREN.

THE rarity of this affection in infants under the age of twelve months, and the difficulty of distinguishing it at the outset from simple intense broncho-pneumonia, constitute the *raison d'être* for the publication of the case.

The patient was a female child, aged four months when first seen on Sept. 14th, 1888. The interest of the case does not really begin till the morning of Jan. 20th, 1889, when I was called to see the child because of the state of her breathing. She had suffered from a catarrh during the past four or five days, but on the night of Jan. 19th she was in a state of sound sleep, with a normal temperature, and breathing 24 to the minute; this proved to be a calm before the storm. On the 20th, at 9 o'clock, the breathing varied from 56 to 72 per minute, and the expiratory sound was panting, with a well-marked pause between inspiration and expiration (so-called expiratory respiration). The temperature was 104·2°; the lips pale and slightly blue; the alæ nasi working, but not the sterno-mastoids; the pulse was 168. *The child screamed at the slightest touch, and especially when lifted up* in such a way as to stretch the trunk; the right back and side were harder than the left; there were dulness, tubular breathing, and sharp râle at the right base behind. This side was ordered to be poulticed and an ice-bag applied to the head. The abdomen was normal. There was no retraction of the head, but the child had vomited once. On Jan. 21st there was no improvement, the dulness at the right lower half of the chest had increased, and there was some sensation of resistance on percussion; the rate of the pulse and breathing had increased; the heart's apex beat was in the fifth space, a quarter of an inch within the nipple line; the left sterno-mastoid was working very vigorously; the right side did not move so freely as the left; the supra-sternal notch and lower sides of the chest receded during inspiration; the abdomen apparently moved equally on the two sides; certainly there was no want of expansion during inspiration over the lower abdominal region. The case progressed from bad to worse, and on Wednesday night (23rd) matters seemed to be rapidly coming to an unfavourable climax; the whole of the right side was dull, and there were dulness and crepitation over the left lower lobe. On Thursday morning an exploring syringe was introduced in the right lower axilla and a sanguinolent fluid withdrawn; twelve ounces were at once evacuated by aspiration; after this the child, and the breathing, and the pulse were much improved, but towards the afternoon grew worse again, and it was evident from physical examination that air had gained access to the pleura, and that the lung had not expanded. Mr. Bilton Pollard then used the aspirator with marked temporary relief, and with the further withdrawal of a few ounces of the same sanguinolent fluid. But the relief was only temporary, and the next day it was decided to lay open the thorax and relieve the pressure caused by the pneumothorax on the lung and mediastinum. This was done with great benefit; the child recovered consciousness to a considerable extent, and the pulse and breathing were greatly improved. On Saturday (the 26th) vomiting and diarrhœa became more frequent, the brain again began to fail, the anterior fontanelle sank, and the child died at 3 P.M., in a state which Marshall Hall would have called "hydrocephaloid."

The necropsy was most instructive. The disease was limited entirely to the thorax, and there were no tuberculous formations either in the lungs or mediastinal glands; the pericardium and left pleura were healthy; the lower lobe of the lung was consolidated—*collapse-pneumonia* over its lower half; the right lung was much reduced in size, and occupied the groove by the side of the vertebræ; its

substance was hard and collapsed in the upper half, but friable and evidently pneumonic in the lower half. On section, muco-pus was seen in the tubes, and several small collections of pus were seen in the periphery of the consolidated lower lobe; one of these was in direct communication with the pleura by means of a widely patent fistula. The whole of the pleura was lined with a greyish-yellow lymph, and the subcutaneous and muscular tissues of the thoracic wall were infiltrated with a sanguinolent serum.

The history of the case was most probably this: After a catarrh severe broncho-pneumonia set in, and in places proceeded to the formation of small abscesses; one of these burst into the pleura, and set up pyo-hæmothorax of fulminating intensity. Relief naturally followed the removal of the positive intra-thoracic pressure, but the bronchial fistula in the lung allowed of the development of a pneumothorax of such severity as to jeopardise life by its intra-thoracic pressure on the mediastinal contents.

Harley-street, W.

A CONTRIBUTION TOWARDS THE DISCUSSION ON THE EMPLOYMENT OF ALCOHOL IN MEDICINE.[1]

BY A. G. BARTLEY, M.D., M.R.C.S.

MY opinion is adverse to the use of alcohol, and I might proceed to give grounds for this opinion; statistics, quotations from authorities, as well as facts, I might supply myself, so as to make my paper more or less exhaustive. My aim is, however, less ambitious. I have called my paper a contribution merely. It is, in short, an account of certain incidents in my experience which bear upon the question; and these I relate as briefly as possible and in the order of their occurrence. I will begin by relating an incident which first directed my attention to this subject, and which will show that I had taken up a strong ground in this controversy even before I was aware there was such a controversy at all.

After I took my degree in medicine I passed at once into the army, and my first cases of independent medical practice were in a battery of artillery in the Punjab. After a year or so with this corps I served two years in an infantry regiment without a senior surgeon, all this time acting to the best of my lights, but entirely independent and uncontrolled. At the end of this period, and about my fifth year of service, a senior surgeon joined the regiment with power of superintendence. He was an able and a kind man, and it was not at all in a spirit of unfriendliness that, going into dinner one night, he said to me, "I was in your ward this afternoon and found a bad case of delirium tremens in which you had omitted to order stimulants; however, I have made it all right." I replied, "I have no case of delirium tremens at present." He said, "Yes, a bad case, which will probably not survive, and so you had better take care." After some consideration I at length made out the case he referred to, and replied, "That man has no delirium tremens and will certainly be at duty in a week." We thus had a difference of opinion. I begged him, however, to leave the case in my hands, which he did, and the man was at duty in fair health in a week. It was, in fact, a discovery to him, an old soldier, that delirium tremens could be treated successfully without stimulants; and, I must add, it was a discovery to me that, although I knew there was such a disease in the regiment, I had actually treated cases of the ailment myself without knowing it. That delirium tremens can be, and ought to be, treated without stimulants is now a commonplace of practice. I speak of the year 1866. At that time the treatment consisted chiefly in administration of stimulants and opium, and I take no great credit to myself for breaking away from the traditions of the profession. I simply did not treat the disease by name. It would now be called "alcoholic poisoning." I looked on recovery as a matter of course, recorded the case as debility, sometimes from drunkenness, but more generally omitted the remark as likely to draw down the attention of the commanding officer to the offender. On the occurrence of the above incident, however, my attention was directed to the subject. I continued my treatment. My two colleagues continued theirs, and, although we were seldom without a case of delirium tremens, no case of any severity occurred among my patients. I need not say that the matter was often warmly debated. In those days Aitken's Practice of Physic was, as it still is, the chief authority in the medical service, and it was with keen delight that in the new edition of that year I found the treatment of this disease laid down: that, as it proceeded from an irritation of the nervous system by alcohol, the first condition of cure was to remove the cause, to forbid alcohol, and to give food in all possible ways, as the patients were dying of starvation—in fact, the treatment I had been pursuing. Aided by this book, I had the pleasure of making a convert of my senior.

The next three years are barren of incident. I served in the Channel Islands the greater part of the time with a battery about one hundred strong, and quite isolated. After this I returned to India, and was put in medical charge of the Artillery Division at Mooltan. It was in this station that I studied the heat fever, in which I was led to adopt a modification of treatment, which included, I may add, an avoidance of alcohol. I early made observation of another troublesome and prevalent Indian ailment—diarrhœa. Patients admitted to hospital with diarrhœa very rapidly recovered by dietetic means alone, and without drugs. The climate of the Punjab is dry, very different from that of Bengal, where, we know, diarrhœa does not always tend to cure itself. In truth, the diarrhœa was curative, proceeding from some improper ingesta, very frequently a symptom of alcoholic poisoning. On coming to hospital, milk and arrowroot were given as diet, and, with rest and quiet, in a day or two the man was well. Similarly among the children diarrhœa, which was in any case rare, proceeded from something unwholesome they had eaten, or from fever. That arising from the former cause cured itself, and fevers in the hospital, cooled artificially, quiet, and darkened, seldom lasted over the second day. So that a child brought to hospital almost insensible with vomiting and diarrhœa would be quite lively next day, and without any special treatment other than cold applications. Thus, in addition to delirium tremens, which was very rare, two other important Indian diseases, diarrhœa and heat fever, were treated by sanitary measures, any drugs employed being mere adjuncts, and alcohol would only have marred the cure.

There were many cases of acute chest disease in the cold weather. On admission to hospital, they had plainly one thing in common with those suffering from alcohol; they were exhausted from sheer want of food. It was the first and main point of my treatment that this should be met by prompt feeding, most generally by repeated cupfuls of arrowroot and milk. I gave nitre or other neutral alkaline salt, and morphia for hacking cough. The tongue began to clean at once and the temperature to fall, and the haggard and worn patient got refreshing sleep and began to convalesce. In fact, the cases ran parallel with the former ailments I have mentioned, and I soon ceased to employ with them any form of alcohol. They usually passed through a crisis, sometimes extremely severe. The temperature became subnormal—at least, as evidenced by the thermometer; the face shrunken, with feeble pulse. My practice was, at first, to give hot wine-and-water in this stage. However, I found that the stage was very transitory, and that hot milk-and-water was quite as restorative; the patient soon went to sleep, and normal warmth returned.

Hepatic disease is not so frequent in the Punjab as it is found down country, nor by any means so severe. I cannot recollect any deaths due to it directly during my stay, or any case of hepatic abscess. Minor congestions and enlargements were a frequent cause of sickness and invaliding. The treatment a few years earlier consisted in blistering, stimulants, and a mercurial course. Some time in 1863 a surgeon in Burma, whose name I cannot now recall, recommended ammonium chloride. This I tried, and thought it acted very favourably. About 1866 an immense change for the better was brought about by the introduction of podophyllin. It was called the vegetable mercury, having quite supplanted that metal, which indeed became on all hands, in all diseases, quite decried. At the time I now refer to (1870) I began to discontinue the use of podophyllin in hepatic disease, finding Epsom salts far more active and rapid in effects. I remember getting the idea from a translation in the Sydenham Society series of some German researches on the effect of certain saline springs, and made for myself an artificial mineral

[1] A paper read before the Æsculapian Medical Society.

water. This, the equivalent of the present white mixture, eased the pain and reduced the size of the liver, just as we are now familiar with, but which was then to me a real discovery. After a few days of this treatment the patients were very much the same as convalescents from chest disease. They needed time and rest and suitable food—in short, nursing,—and had a chance of regaining health. Hepatic disease is, however, ineradicable. It soon recurs in the great heat of the climate and in men not very abstemious, and few once ailing with it serve long in hot climates.

Thus in one after the other of these important diseases experience was altogether against the employment of alcohol. It must be borne in mind that I began with no theory. I gave alcohol in pneumonia and hepatitis, while rigidly withholding it in fever and diarrhœa. I delayed the alcohol, however, in those diseases to a later stage, until the temperature was nearly normal, and at length discontinued it altogether, finding that it retarded the cure and prolonged convalescence. I lost some cases of course, and among others one from delirium tremens, an old soldier who had frequently suffered before, and it was at first a matter of great pain to me to think that if I had followed the usual routine of treatment the cases might have ended differently. My colleagues, I knew, would probably have held so. However, my confidence revived in watching their practice. I had not the mortality or the severity of forms of disease in hospitals around me. I have seen two waiting men attending on delirious cases, holding the patients in their beds, and preventing their injuring themselves, just as I had seen in the old regiment typical cases of delirium tremens; but I had no such cases, and I had no doubt then, nor have I now, that the delirium arose from the free use of stimulants combined with want of food.

After the regimental system had been abolished I found myself superseded in charge of the corps of artillery with which I had served four years, and was attached to a regiment of infantry. The surgeon-major in charge went on leave soon after I joined, and as I was the next senior, according to the new regulations I assumed charge, although quite a new comer. It was then for the first time I became aware how much I had diverged from the ordinary practice—at least, as it was then in the service. The surgeon of the regiment next in rank to myself soon after I joined consulted me about a bad case of hepatitis, with high fever, foul tongue, and diarrhœa. He had given a variety of drugs which I do not remember. I found, however, that he was giving large quantities of food: jugged hare, strong soups, and six or eight ounces of port wine daily. I said I thought the man was getting too much food to digest, recommended milk diet, to stop the wine, and give salines. He replied, to my astonishment, in a nervous way, he would ask —— his opinion. Now this man he mentioned was only a short time in the country. He was ten years my junior, and six or seven years his junior. I said no more, and went about my business. A few days afterwards, however, the matter cropped up again, and he spoke with an astonishing degree of bitterness on the subject. He said he had once before met a man with these views, and he proceeded to refer to a case of mine which he had visited for me on the previous day as likely to die of hectic from want of support. I pointed out to him reasons why the ailment was not hectic, and assured him the man was not in danger. In truth, my case was severe Peshawur fever which resisted quinine, and the diagnosis was doubtful, as the man had originally come to hospital for treatment of a stricture. And, I may add, the man did not die. I saw him often years afterwards at Woolwich. I was greatly surprised at the degree of irritation this surgeon displayed, and became aware that the administration or withholding of alcohol was not merely a scientific question, but one for faith and belief, with strong feeling attached thereto. His case of hepatic disease died; so did at least one other in the two months I had charge of the regiment. My colleague did not again seek my advice in his difficulties, and he was clearly not converted, for, I regret to say, he died himself from the disease in the following hot weather.

A few months after my transfer to this regiment I came home in a troopship, and there again my divergence of treatment left me utterly isolated. I was third in order of seniority on board, and was put in medical charge of the women and children. It was the last troopship of the season, and carried only invalids and soldiers' families. Of the latter there were about seventy, with an average of perhaps two children in each. On the day after leaving Bombay a case of measles was found on board. I took the case into hospital, and every precaution to isolate it was adopted—unavailing, however. The sixth day afterwards six cases were reported. After another six days thirty more were found infected, and put under treatment; and I think that every child on board passed through the disease. The only number I can now recollect is that, after discharging all convalescents, thirty-six cases were sent to Haslar Hospital on arrival at Portsmouth. There must have been from eighty to one hundred cases in all. All these I treated myself in the hospital, restricting myself to this duty at first with the idea of isolation, afterwards in order to control the treatment, for which I was personally responsible. I gave no stimulants, and met every case of high temperature promptly by wet towels to the chest and abdomen, and by giving for food very dilute Swiss milk *ad libitum*. This treatment met with deep disapproval on the part of the mothers, who were all strangers to me, and accustomed to very different treatment. Towards the end of the voyage I found the women were not unsupported in their disapproval. They carried their complaints to the various officers commanding detachments, and thus officially to my senior, the surgeon-major in charge. Now this surgeon-major had been unlucky. He had treated only two children on board, one of them his own son. They were both dead, whereas I had lost no cases, and so, although there was a difference of opinion between us, I had not much difficulty in arranging that the treatment should be left entirely in my hands. I will summarise the result. I was the only medical officer on board who gave no alcohol. I treated personally the largest number of cases, and I alone lost no patients. Moreover, of three children who died on board, two, as I have said, were treated by the senior medical officer, and the third by my assistant. I will give particulars of this, as it is a most illustrative case. It was not a case of measles, and was treated by him in the women's quarters, and I first heard of it when he told me the child was dying. I asked him to let me try to save it, which he gladly did. I put it in hospital with my measles cases. I stopped the wine, very much to its mother's disgust, stayed with it almost an hour, feeding it with milk-and-water, which it took greedily, and left it fully assured it was out of danger. The child lived for a week, and was slowly improving. I gave it no drugs, as it had no symptoms. At the end of this time I told my assistant, whose patient it had nominally remained, to take it again to the quarters, as the hospital had become so crowded. He did so, and, notwithstanding all he had seen of my practice, he put the child at once on brandy, and it died in a few hours. I will make no further comment on these occurrences except to say that perhaps a more crucial experiment could not be devised.

I reached Portsmouth in April, and expected to find the alcohol question a matter of keen debate in England. I need not say I was in this disappointed. I found matters running in the old groove. This is several years ago. We know matters are now righting themselves. To continue. During three years' tour of duty at home I avoided discussion, and, as far as possible, all consultations. I have, however, one instructive instance to bring forward from that period. In the family of a sergeant of the commissariat two well-grown lads, the eldest about ten years old, had caught measles and were very ailing. The mother frequently suggested that the boys should have stimulants, which I refrained from. Now it happened that this sergeant was married without leave, and his wife and family were not recognised. My attendance on them was therefore voluntary; not only so, but her acceptance of my attendance was voluntary, and I found before many days that the children were taking stimulants under the direction of some private practitioner, and I ceased attending. The father, however, was displeased at this, and in a day or two begged of me to call. I did so, and found a great change for the worse, in the eldest especially. To me the cause was patent; besides that, the room smelt strongly of brandy. I did not mention this, but said to the mother as kindly as I could that the boy had no more chance of dying than she or I had if she would follow my directions. She was obdurate, however, and I did not call again. In a day or two afterwards the father came and told me the boy had died. This is the last instance I will bring forward from my military service.

I may mention a case which occurred since my coming to North London, a case of unusually large pleuritic effusion.

In consultation with a physician, specialist in chest disease, the fluid was evacuated, and the patient made a rapid recovery. This physician some time afterwards remarked to me what an excellent case it was—what a remarkably rapid convalescence. I did not emphasise in my reply, as you may suppose, that which it is my duty now to do, that I had carefully omitted the six ounces of port wine daily he had prescribed for my patient. I did once succeed in converting a hospital physician to my views—a *rara avis in terris*. I one day undertook to stand in the middle of his largest ward, and from that position to point out every patient therein who had been taking stimulants for three or four days at least, and I succeeded. To me the paleworn aspect of the patient is unmistakable.

With this I end my paper. It is not for me to go into statistics on the point, such as may be found, I dare say, in books or hospital reports. I know that such statistics are scant, for the question has not yet become a matter of calm scientific investigation. It is still one of the "fads" of the day, which the practical physician has not time to trouble about. Nevertheless, the reform is irresistibly advancing. No one can overlook the unmistakable diminution of the consumption of alcoholic liquors in hospitals. This is probably due in great measure to the greater temperance of the general community—a change of fashion rather than a reform of practice. It has been said long ago that the evils wrought by a theory have never in history discredited the theory; and certainly this would seem to be true in the practice of medicine. The melancholy history of the use of calomel and of opium in India is a saddening illustration. A few men here and there question the theory, and gain adherents chiefly among the young. The older men are not so much converted. They die out, and by-and-by the world awakes and exclaims how foolish the last generation was.

Stoke Newington.

DISSECTING ANEURYSM OF THE TRANSVERSE AORTA RUPTURING INTO THE PERICARDIUM.

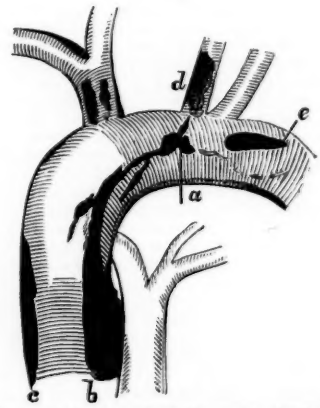
BY F. W. JOLLYE, M.R.C.S., L.R.C.P. LOND.

THE following case may be of interest, as showing that a dissecting aneurysm commencing in a part of the arch of the aorta beyond the pericardial sac may nevertheless travel backwards and burst into it, causing death.

J. P——, an old man of seventy-six, who was suffering from senile decay, with occasional attacks of bronchitis, but with no symptoms of cardiac mischief, was in his usual health until getting up about 8 A.M. on Feb. 13th, 1889, when he felt a sudden præcordial pain and was a little giddy. These symptoms passed off, and he felt as usual until about 9 A.M., just after drinking some tea, when he again complained of epigastric pain and faintness. He was held in the chair by two persons until I saw him, about twenty minutes afterwards, when he was collapsed, his pulse very feeble and irregular, hands cold and livid, and quite unconscious. He was immediately laid on the floor, hot-water bottles applied to his feet, and brandy administered in small doses gradually for twenty minutes, when consciousness returned. His heart sounds, on auscultation, were irregular, feeble, and muffled. I left strict orders that he was on no account to be allowed to move his head off the floor or to go upstairs (as he was constantly asking to do), and he obeyed these instructions until 2 P.M. (nearly five hours afterwards), when he suddenly sat up and said he would go upstairs, but immediately fell back dead.

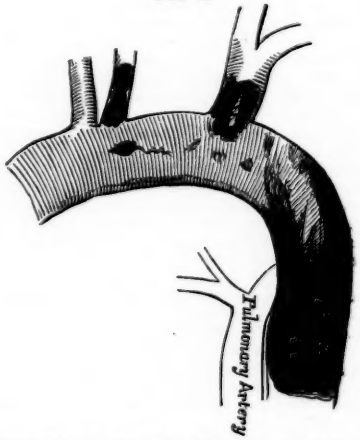
Necropsy.—Abdominal cavity natural. On opening the thorax, an immensely distended pericardium, triangular in shape, apex upwards, presented itself. On opening the pericardial sac, I should say about from half to three-quarters of a pint of blood-stained serum escaped, and a blood-clot covering the right auricle and ventricle, and extending round to the right and behind, was removed, and found to weigh ¾ lb. On looking at the heart and vessels from the front, there was seen to be a blood-clot under the outer coat of the aorta at the base, especially marked between the aorta and pulmonary artery, and from this a clot extended up to the base of the internal carotid and for an inch up its wall. There was also a small clot under the outer coat of the innominate and the third part of the arch. Looking from behind, the external coat of the arch was found ruptured close to its base, and blood-clot extended from the rupture upwards under the external coat nearly to the origin of the innominate. On opening the outer coat and washing away the blood-clot, no rupture of the inner wall could be found near the base; but, on splitting up the arch, a small clot was found protruding from a rupture of the internal coat, about three-quarters of an inch long, and lying obliquely on the anterior wall just below the origin of the internal carotid. This rupture was situated in a raised, calcareous, yellowish plaque; just beyond this there was another small stillate rupture in a similar calcareous patch. The whole arch was much dilated, and the inner surface was mottled with yellowish patches of various sizes, raised above the surface, some being calcified, others still soft. (See Figs. 1 and 2.)

FIG. 1.



Anterior view of the arch of the aorta, showing the staining by blood-clot between the external and middle (?) coats of the vessels. *a* Corresponds to the external coat seated over the rupture of the middle and internal (?) ones (the external coat is not ruptured here). The track the blood has taken can be traced downwards to the base of the aorta (*c b*); the blood-clot does not surround the whole of the anterior half. There are also effusions of blood staining the first inch of the internal carotid, slightly the innominate, and a few stains beyond the subclavian (*e*). The greatest collection of blood-clot in front was between the pulmonary artery and the aorta (*b*). (Reduced ¼ diameter.)

FIG 2.



Posterior view of the arch of the aorta, showing the blood-clot surrounding the posterior half of the base of the aorta for about an inch, and also the internal carotid artery and a few other scattered clots. The external coat ruptured over the lower part of this blood-clot on the posterior surface, allowing the blood, to the amount of a pint, to collect in the pericardium. (Reduced ¼ diameter.)

Remarks.—I think there can be little doubt that the internal coat gave way whilst getting up, and that the

blood gradually dissected its way down to the base of the aorta under the external coat, and that under the increased pressure caused by the drinking of hot tea this coat gave way at its weakest spot—viz., near the base. In this case the dissecting aneurysm did not start from an atheromatous ulcer, as it may do in some cases, but from an erosion of the intima by the sharp edges of the calcareous lamellæ, which are brought to bear on this coat by the contraction of the atheromatous patch, due to the loss of some of its softened-down constituents. The primary lesion, as is usual, was in the anterior wall of the arch. According to Dr. Hayden,[1] a dissecting aneurysm of the first part of the arch usually bursts into the pericardium; but, on the contrary, when the second part of the arch or any point of the aorta beyond this point is the seat of the primary lesion, separation of the coats is usually found to extend along the remainder of the length of the vessel and over the whole or greater part of its circumference, whilst the blood has re-entered through an opening in one or both common iliac arteries. Dr. Duffin has kindly referred me to some similar cases published in the Pathological Transactions, but these I have not at hand to refer to.

Warminster.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

SUPPRESSION OF URINE FOR NINE DAYS AFTER PARTURITION; DEATH.

By F. F. BOND, M.D.

I WAS called to see Mrs. H——, aged twenty-seven, on Jan. 9th, at 2 P.M., and was informed that she had been delivered of a stillborn child at 5 A.M. the same morning, being attended by a midwife. She had advanced to seven months. It was her third pregnancy: the first had been normal, and the child living; the second was only seven months, and the child dead. The woman was subject to epileptic attacks, and had a very nervous temperament. The confinement had been very speedy, and was followed by rather severe flooding, which, however, soon abated. I found her suffering from very intense "after-pain," otherwise her condition was good. For the pain I prescribed a mixture of bicarbonate of soda and opium. The progress of the case was as follows:—Jan. 10th: Pain better; some vomiting; very little lochia. Pulse 82; temperature normal. Passed no urine. I sent a simple effervescing mixture, with instructions to let me know at night if no urine had been passed.—11th, morning: The patient had passed no urine. She had not sent because there had been no uneasiness. Pain and vomiting ceased; temperature and pulse normal; tongue clean. Passed catheter, but found only a few drops of urine in the bladder. Evening: Very intense pain over the loins; very little lochia (not offensive); per vaginam no tenderness or resistance to be felt. Again passed catheter; still no urine. Breasts rather full. Ordered hot fomentations to the loins and vulva, a strong calomel and jalap purge, a morphia and belladonna suppository, and an effervescing diuretic.—12th, morning: Has passed no urine; only one free stool. Pain over loins very intense; brown fur on tongue, rather dry; pulse 90, and temperature normal; restless; very little lochia. Passed cathether; still no urine. Ordered Simpson's bath; also to take ten minims of antimonial wine and thirty minims of tincture of jaborandi in effervescing draught every three hours. Evening: Much easier; perspiring profusely; no urine; a vesicular rash over the body.—13th: Pain over loins, but not very severe; passed fair nights; easy; no urine; one stool; tongue clean; pulse 80, and temperature normal; rash drying up; will take very little food or medicine. Ordered another Simpson's bath.—14th: Much the same as yesterday.—15th: Not so well; vomiting and retching; very restless; pulse and temperature as before; bath had acted well; tongue lightly coated with brown fur. Ordered a simple effervescent mixture, also counter-irritants to the epigastrium and loins, and to repeat the bath.—16th and 17th: Much the same; declines both food and medicine; very restless; still no urine; pain over loins continued, but not very severe. The bath was employed each day, which acted fairly well.—18th, 9 A.M.: Much worse; pulse 84; tension much increased; temperature normal; vomiting and retching; very drowsy; delirious occasionally; breath smells of urine for first time; sordes on lips and gums. She gradually became worse, convulsions set in at 2 P.M., and she died about 6 P.M.

Unfortunately very little could be done in this case; the patient would not take medicine, and only very little food. The Simpson's bath had acted very well indeed, and probably kept the patient from succumbing earlier than she did. The cause of the suppression of urine is very obscure; I am rather inclined to believe it was the result of impacted calculus in both ureters, though there was no history of any previous attack of the kind. If it were so, it must be very rare, and rarer still its coincidence with parturition. Unfortunately a necropsy was not allowed.

Rastrick, Yorks.

[1] Quain's Dictionary of Medicine: art. Diseases of the Aorta.

REMARKABLE ACTION OF ANTIPYRIN IN RENAL DISEASE.

By M. H. FEENY, M.R.C.S., L.R.C.P.E., L.M.

I REGRET that absence in continental travelling has compelled me to hold back, through so many months, the report of a case so striking and important as the following. It came under my care in the summer of last year, while acting as honorary medical officer to the Cottage Hospital at Clevedon, Somerset. On the card over the patient's bed was written "J—— B——, aged twenty-nine; Bright's disease." The matron informed me that the case was regarded as hopeless. The patient was admitted on March 3rd, 1888, with the following history. Her father, having enjoyed good health till a few days before his death, died of inflammation of the lungs at the age of sixty-eight. Her mother died at the age of sixty-six from chronic rheumatism and liver disease. She had had seventeen children, of whom five died in infancy, but the remainder grew up strong and healthy. The patient had been in good health till two months previously. She was then seized with a diphtheritic sore throat, and was soon after ordered to Clevedon for change of air. On the journey she caught cold, dropsy quickly supervened, and she was admitted into the hospital on March 3rd. From this date till the following June the case was carefully nursed, and the routine *rôle* of medication was adopted. Still the malady made steady progress, and on June 14th, when I saw her for the first time, I observed the following condition. There was extreme general dropsy—the abdomen, face, and extremities distended with dropsical effusion; great pain in the back, especially the lumbar region; intense headache; failing vision; heart action weak and irregular; difficulty of breathing, owing probably to a pushed-up diaphragm and pleural effusion; skin sallow, tense, and shining; urine scanty, of high specific gravity, and loaded with albumen; anæmia and general prostration. The condition of the eyes was very characteristic, the lower lids forming two distended translucent pouches. But the state of the ocular conjunctivæ was very striking. These were, to a large extent, raised from the sclerotic in transparent bladders of effusion, producing the condition called chemosis, and seriously endangering the circulation of the cornea. For some days I saw the case each morning, as a matter of form, as I passed through the wards. She took little notice of what passed, having evidently abandoned herself to despair. From previous slight but inconclusive evidence of antipyrin in renal cases, and with a view to relieve the distressing headache, I decided on the use of the drug. I ordered three grains twice a day, with strict injunctions to observe carefully the action of the heart. The need for this precaution was quickly demonstrated by increased irregularity, fainting, &c. On the third day the dose was reduced to three grains daily. From this date general amelioration of the symptoms was observed, and constant steady progress reported. After a few days a tonic supplemented this treatment, and in the course of three weeks a great change was observable; the dropsy was much less, the intense headache

relieved, the appetite improved, and the patient much brighter and more hopeful. By the beginning of August she was up and about, visiting her friends. All traces of dropsy had disappeared, the general health was good, and there remained only a small quantity of albumen in the urine. On Aug. 13th she was discharged for a convalescent home. This was a very striking case, and it attracted much local attention.

Just a word about another case of a different type. While spending some of the winter months at Arcachon, a clergyman, aged sixty-four, consulted me. He had been in failing health for some time, and his French physician was treating him for diabetes. I found a large quantity of sugar in the urine. I again decided on the antipyrin treatment, and, strange to say, the same cardiac intolerance manifested itself. I reduced the dose to three grains daily. At the end of three weeks the patient's health was much improved, and the quantity of sugar reduced to one-fourth. Hurried away in my travels to the Riviera and Italy, I lost sight of the case. It afforded, however, another strong link to the chain of evidence in favour of antipyrin in renal disease.

Leinster-square, W.

SUCCESSFUL TREATMENT OF A CASE OF DYSENTERY BY STRONG ENEMATA OF ALUM.

By JOHN HEPBURN, L.R.C.P., L.R.C.S., L.S.A. LOND.

IN the following case the above treatment proved so eminently successful that I have thought it worthy of publication.

On June 4th I was called in to see J. G——, aged twenty-seven, female, whom I found was suffering from a severe and well-marked attack of dysentery. The patient stated that she had that day returned from the country, where she was in service; her illness had lasted six weeks, during which time she was under the treatment of local medical men; but as her condition was gradually becoming worse, she had been advised by them to return to her home. She complained of violent purging (about twelve stools in the twenty-four hours), accompanied by pain and tenesmus, the stools being liquid, very offensive, and bloody; she also suffered from constant nausea and vomiting. Lead, opium, bismuth, ipecacuanha, Dover's powder, and many other astringents were tried in various combinations, but with very little success. On June 10th, as she was no better but gradually becoming weaker, I thought it advisable to try some other plan of treatment. Accordingly I ordered her two enemata daily, each containing half an ounce of alum to the half-pint of water. The first injection brought away a good deal of "dirty stuff," presumably shreds of tissue and sloughs, and caused a certain amount of smarting pain; this, however, subsided after a short interval, the patient reporting that she felt much more comfortable; her condition then began immediately to improve, the tenesmus becoming less, the stools not so frequent and more solid, and the sickness ceasing. The second injection caused less pain, and the improvement continued. The same treatment was followed on the next day (June 11th). She was now so very much better (the stools being only three in number in the twenty-four hours, with only streaks of blood) that on the ensuing day the enemata were omitted; but on the 13th she relapsed, the stools becoming more frequent. I then thought it advisable to resume the injections; accordingly two were administered on the 14th, the same good results following them as on the former occasion. This treatment was continued till the 17th, the patient improving day by day. From the 17th till the 21st one injection a day was found sufficient, and, finally, on the latter date they were left off altogether, the patient having made a perfect and uninterrupted recovery from the 14th.

That the favourable termination of the case was entirely due to the enemata I think is sufficiently proven: first, by the good result obtained from the first two injections and rapid relapse on leaving them off on June 12th and 13th; secondly, by the absolute recovery of the patient in seven days after an illness lasting over eight weeks, during seven of which purging, with tenesmus and bloody stools, nausea, and vomiting had existed in varying degrees of severity.

Hammersmith, W.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

ST. MARY'S HOSPITAL.

TWO CASES OF NEPHRO-LITHOTOMY; RECOVERY; REMARKS.

(Under the care of Mr. PEPPER.)

IT is only during the last ten years that the operation of which the cases given below are examples has been performed, and calculi removed from a kidney when the symptoms of stone in it are subjective, and there is no evidence of abscess or fistula in the loin. During that time, however, our knowledge of the surgical treatment of renal diseases has advanced rapidly, and many patients formerly condemned as incurable have been restored to health. In the first of Mr. Pepper's cases there was no hæmaturia, to the absence of which he draws attention in his remarks. Although not a constant symptom, it is an important one in the diagnosis of renal calculus. Wright[1] says: "My own conclusion is that renal hæmaturia is the only single symptom of anything like cardinal importance, and that this, if the trouble is of more than a year's standing, and there is no evidence of nephritis, and there is no tumour to be felt, makes the diagnosis of calculus fairly certain." It will be also noted that the stone was not easily felt on exposure of the kidney, and that, although the opening through which it was extracted was made in the anterior part of the pelvis of the kidney, and not through the renal substance, there was considerable hæmorrhage. Jacobson[2] recommends the choice of this part of the kidney for the incision; he continues his remarks on the subject of hæmorrhage at the operation as follows: "Another and, I think, a preferable method of exploring in doubtful cases is to open the pelvis or the thinner kidney tissue close by, and to pass a finger into the organ," &c. The arrest of the hæmorrhage is usually accomplished by the means employed by Mr. Pepper, but has required plugging of the renal incision.

CASE 1.—Walter G——, aged twenty, a note-paper folder, was admitted into St. Mary's Hospital on Feb. 24th, 1888, for pain in the left side. He first commenced to have pain in this region four or five years ago. The pain was paroxysmal in character, and at first he used to have an attack about every three months. The attacks increased in frequency and strength, and a year ago he noticed the pain radiating to the left thigh and testicle. Shortly before admission the attacks had been of almost daily occurrence, each lasting about an hour. They were often brought on by carrying a heavy weight or running. At times there was a thick, light-brown sediment in the urine, which clung to the vessel. The pain when most severe was accompanied by violent attacks of vomiting. There was not known to have been hæmaturia at any time.

From the date of admission to Feb. 28th he was kept in bed, and during that time had one attack of pain. The urine was faintly acid in reaction, sp. gr. 1020, with a trace of albumen and slight deposit of urates, but contained no blood.

On Feb. 28th he was placed under ether and turned on his right side, with a large pad underneath him to render the left lumbar region prominent. An incision about five inches in length was then made, beginning just below the tip of the twelfth rib and extending backwards and slightly upwards towards the transverse process of the first lumbar vertebra. The different layers of the abdominal wall were then divided and the perinephritic fat exposed. The abdominal wall in front was pressed forcibly inwards to raise the kidney nearer to the surface of the wound. The perinephritic fat was next torn through, and the kidney, and with it the descending colon, exposed. The kidney was

[1] Med. Chronicle, vol. v., p. 462. [2] Operative Surgery.

found to be very movable, and was explored with the fingers both in front and behind. No stone was detected, but the pelvis of the kidney was found to be dilated. The kidney was again manipulated with the fingers, and at last a hard nodule was made out at the upper end. This was the stone firmly fixed in one of the calyces. An opening was then made with the finger-nail through the pelvis in front and the finger introduced. Many ineffectual attempts were made to remove the stone with numerous forceps, but it remained firmly embedded. At last it was removed with the fingers and a director, the difficulty in its extraction being partly due to the close proximity of the last rib to the iliac crest. There was considerable hæmorrhage from the kidney substance, which was checked by pressure with hot sponges. The wound was irrigated with perchloride of mercury solution (1 in 2000), drainage-tubes inserted in front and behind the kidney, and the edges of the wound drawn together with silver sutures. Iodoform and wood-wool pads were used as dressing. The patient stood the anæsthetic well. The calculus was composed of uric acid. It weighed 70 grains, was oval in shape, measured 1 in. by 3 in., and was covered on the surface with splendid crystalline spicules.

After the operation the patient rapidly recovered. For the first few days there was blood and albumen in the urine, but this soon passed off. On April 1st the wound was nearly healed and the patient was allowed to get up; on the 5th the wound was quite healed; and on the 16th he left the hospital quite well. The temperature never rose above 99·4°. The patient was quite well twelve months after the operation.

CASE 2.—C. W——, aged thirty-four, a factory manager, was admitted on July 14th, 1889, into St. Mary's Hospital, under the care of Dr. Broadbent, for symptoms of renal calculus. The family history was good. The patient was unmarried, and, with the exception of rheumatic fever a year previously, had had no serious illness. He had lived a healthy life, and a few years ago went in extensively for athletics, but at last broke down whilst in training. Five years ago he was passed as a good life by an insurance company. The patient had suffered from attacks of pain in the left lumbar region ever since he was a boy. An attack would come on suddenly every two or three months, and in the intervals he would be quite well. A long walk would often bring on the pain. He never experienced pain in other parts than the left loin. He never noticed any blood in the urine, but his mother told him that he used to have attacks of pain when a child, and that then there was hæmaturia. Since last November, three months after he had rheumatic fever, the attacks of pain had become more frequent and severe, and had remained so. The last and most violent was on July 13th, 1889, and continued from 11 A.M. to 8 P.M., leaving him prostrated. He had noticed that he was free from pain whilst lying down.

On admission he was well nourished, but with an anxious expression. There appeared to be a slight fulness in the left lumbar region, which was tender on pressure. There was no undue frequency or difficulty in micturition. The urine was acid, sp. gr. 1020, and contained blood, pus, and one-fourth albumen.

On July 18th the man was placed under chloroform, and Mr. Pepper performed lumbar nephro-lithotomy. The kidney was easily exposed and the stone readily felt. Some difficulty was found in removing the calculus, which filled the pelvis of the kidney, and had one large spur firmly fixed in a calyx. The drainage and dressing were as in the preceding case.

After the operation the patient was troubled with sickness for two days, and on July 22nd he became slightly jaundiced. The urine for the first few days contained a good deal of blood. The drainage-tubes were removed—one on the 16th and the other on the 30th. The temperature was 100° on the 19th and 100·2° on the 20th; since then it had been normal. At the present time (Aug. 12th) the wound has nearly healed, there is no escape of urine from it, and he is practically well. The urine is normal, with the exception of a few pus cells occasionally.

The original calculus was oval, almost black, and with a mulberry-like surface, and was evidently composed of oxalate of lime; it subsequently became much enlarged and irregular in shape, from incrustation with phosphates. In neither case was there any suppuration in the wound.

Remarks by Mr. PEPPER.—In the first case the absence of hæmaturia is remarkable, considering the frequency of the attacks of pain and their violently paroxysmal nature. This seems to show that the pain is caused more by distension of the kidney, owing to the ureteral orifice being temporarily blocked by the calculus, than to the movement of the latter. In the second case it will be noted that the pain did not radiate. It may be further mentioned that in neither case was there any retraction of the testicle. (For the above notes I am indebted to the surgical registrar, Mr. Crowle.)

TOTTENHAM HOSPITAL.

A CASE OF HYDATID CYST OF THE LUNG; DEATH; NECROPSY.

(Under the care of Dr. ADOLPH RASCH.)

HYDATID OF THE LUNG is a disease very uncommon in this country, and the following is a typical example of it, both as regards situation—the lower part of the right lung—and local signs. Fagge[1] says: "Pulmonary hydatids are almost always migrated parasites of the liver. Clinically, hydatid disease of the lung is scarcely likely to be suspected until one or more of the daughter cysts have been expectorated." This applies more especially to those cysts which are deep seated, but, as regards the expectoration of the small cysts and portions of membrane, it must be recollected that it is much more common for a hydatid of the liver to be discharged in this way than for a hydatid having its primary seat in the lung. In either case the expectoration may be similar at first, but when derived from a hepatic cyst it usually becomes bile-stained. Thomas of Adelaide[2] states that he has observed in most cases of hydatid of the lung "an alteration of the percussion note, which becomes markedly tympanitic over a greater or less area around the tumour." In a case of hydatid of the lung recorded by Fagge, where the fatal result was due to hæmoptysis, the blood came from a branch of the pulmonary vein; this had become obstructed and dilated into a cylindrical tube as large as a lead pencil, and had afterwards opened into the cavity that had before lodged the hydatid, although this cavity was shrinking. For the account of the case we are indebted to the house surgeon, Mr. R. Philip Brookes.

T. L——, aged twenty-two, a coalheaver, was admitted into the hospital on Feb. 26th, 1889. He stated that four years ago he had pleurisy on the right side, but that his present illness commenced seven weeks before admission with shooting pain in the right side of his chest and cough. He had lost flesh of late, and had night sweats, but had never brought up any blood.

On admission he was a fairly nourished, muscular man. His lips were blue; he had dyspnœa and spasmodic cough, with copious muco-purulent expectoration. Urine acid; no albumen. Examination of the chest showed the movements on the right side to be diminished, and there was bulging of the intercostal spaces, with absolute dulness over the front and back, the dulness behind extending down to the level of the tenth dorsal vertebra, below which there was a narrow zone of resonance extending outwards, in which moist crepitation could be heard. The breath-sounds and vocal fremitus were absent over the dull area, but a distinct creaking synchronous with the respiratory movement could be heard all over. On the left side of the chest the movements were increased, the breathing was puerile, and there was no dulness over the lung. The apex beat of the heart was in the sixth interspace, in a line with the anterior fold of the axilla; no murmur was audible. The edge of the liver could be felt an inch and a half below the ribs.

During the ten days the patient was in the hospital there was no perceptible change in his condition. His temperature was of a hectic type, varying between about normal in the morning and 101° in the evening. On March 8th he had a sudden attack of hæmoptysis and died.

At the necropsy, on opening the thorax, a large hydatid cyst was seen occupying the right side of the chest, and extending for an inch beyond the sternum to the left. The pleural cavity, with the exception of the diaphragmatic surface, was entirely obliterated by dense fibrous adhesions, which formed the capsule of the cyst. Towards the apex this capsule became gradually thickened to the extent of about an inch, the thickened portion being composed of

[1] Principles and Practice of Medicine, vol. ii., p. 557.
[2] Australasian Medical Gazette, June, 1888. Sajous, vol. i., 1889.

compressed lung of an ashy-grey colour and tough consistence. Against the vertebræ another portion of compressed lung was found; while covering the surface of the diaphragm was a layer of lung from half an inch to two inches deep, which was not airless, but contained several small suppurating cavities with ragged edges. It was from one of these cavities that the hæmorrhage had proceeded. The hydatid membrane had not been ruptured and was everywhere in contact with the fibrous capsule, no hæmorrhage having taken place between them. Numerous small apertures existed in the fibrous capsule, which communicated with the large bronchi. There were no daughter cysts. The clear fluid which the cyst contained showed a trace of albumen, and in the sediment hooklets and echinococcus heads were found. The left lung was hyperæmic; no cavities or tubercle. There were no signs of hydatid disease in any other organ.

EDINBURGH ROYAL INFIRMARY.

A CASE OF SUICIDAL PENETRATING WOUND OF THE NECK; TRACHEOTOMY; RECOVERY.

(Under the care of Mr. MILLER.)

THIS case is one of those which, requiring prompt treatment, usually come under the care of those resident in the hospital to which the patient may be admitted. There are so many elements which enter into the consideration of such cases that it is a matter of congratulation when the patient is discharged well after the infliction of a wound which penetrates the air passage. For not only is the wound a serious one as regards danger from hæmorrhage, and the lung complications which are apt to follow its infliction, but the man is usually in a bad state of health, and frequently suffering from chronic alcoholism, delirium tremens, or mental disease. In one of the earlier additions of a text-book on surgery (1870) we read of the treatment of wounds of the neck: "Plasters to the skin are inadmissible, and so are sutures." The treatment adopted in this case proves their utility, and also the advantage of early tracheotomy. There is a difference of opinion as to the advisability of employing sutures in wounds of the neck. Walsham[1] says: "The wound should not, as a rule, unless quite superficial, be approximated by sutures or strapping, but by position." Bryant[2] continues: "But it must be left to the surgeon's judgment to decide when they may be necessary according to the exigencies of the individual case." Keetley[3] writes: "If these sutures will not interfere at all with drainage, use them. In most cases sutures are not necessary." Erichsen[4] recommends a few stitches introduced at the sides, but not in the centre of the wound. Pick[5] says: "Sutures are in ordinary cases unnecessary, for the edges of the wound can be kept tolerably in apposition without them; and, as primary union can hardly be anticipated, there is no motive for sewing the edges together. They are therefore rarely used in such cases." He speaks doubtfully as to their usefulness when the windpipe has been opened, alluding to the "traditional horror" of them in such cases. There is now, however, with our present system of antiseptic treatment of wounds, much less risk of septic inflammation, and, provided escape for any air which may be expelled from the air passage be secured, with ready exit of discharges to the surface, the judicious application of sutures will do much to shorten the duration of treatment and diminish the size of the scar resulting from such injuries. Due attention must always be given to the position of the head, whether sutures be inserted or not, as this is an important aid to the treatment. We are indebted to Mr. Alexander Miles, the resident surgeon, for the account of the case, which was treated by him.

The patient, S. J——, a retired publican, aged thirty-six, was admitted into Ward 6, Royal Infirmary, Edinburgh, on June 19th, 1889, at 10.15 A.M., under the care of Mr. A. G. Miller. About an hour previously to his admission he had attempted to commit suicide by cutting his throat with a large, rather blunt bread-knife. The incision in the skin and superficial fascia measured about five inches from side to side. It was almost transverse, but more of it was on the left than on the right side of the middle line. At the left angle of the wound there were marks as if the knife had been drawn across the skin more than once. Only the anterior jugular vein and some branches of the superior thyroid vessels were injured. On the left side the sterno-hyoid and sterno-thyroid muscles were completely divided, and on the right the anterior belly of the omo-hyoid in addition. The thyro-hyoid membrane was completely severed and an opening made into the pharynx. The patient was seen soon after committing the deed by a surgeon, who introduced a small tracheotomy tube between the vocal cords through the opening in the pharynx, and then sent him to the hospital.

On admission the wound was thoroughly washed out with corrosive sublimate solution (1 to 2000), and all the bleeding points secured. The tube was removed from the larynx and the high operation of tracheotomy performed through an incision carried downwards at right angles to the self-inflicted wound. The opening into the trachea included the cricoid cartilage and the three upper rings. A middle-sized tracheotomy tube was introduced. The wound in the pharynx was then closed by stitching the several edges of the thyro-hyoid membrane and the muscles together with five or six catgut sutures, the margins of the wound being inverted. The superficial wound was brought together by horsehair stitches and a small tube introduced for drainage. The wound was afterwards dressed with wet boracic lint and corrosive wool. The patient was then put into a bronchitis steam tent, and fed by means of a nutrient enema of beef-tea, eggs, and brandy every three hours.

The man was very anxious that his life should not be saved, and threatened to renew the attempt to destroy it if he got an opportunity. He, however, remained very quiet during the day, and did not interfere with his dressings in any way. After the operation the pulse was fairly strong, 100, regular; temperature 98·8°. At night the temperature was 99·4°; pulse 96, still good. His urine had to be drawn off, as he had passed none since he came in.

June 20th.—The temperature remained about 100° all day. Pulse good, 96; respiration normal. The edges of the superficial wound are adherent.

21st.—Patient rather worse to-day. Breathing somewhat rapid and shallow. No cough. No pain in chest. No physical signs of pneumonia to be made out. Pulse weak and rapid, 140. Temperature 97·8° at night. As he could now breathe quite freely by the mouth, the tracheotomy tube was removed and the wound allowed to close up. Superficial wound in neck healed; some of the stitches and the drainage-tube removed. The patient was fed by the nasal tube. A dose of paraldehyde (ninety minims) given to produce sleep had little effect.

22nd (morning).—Patient rather better to-day. Pulse and respiration more satisfactory; temperature 100·2°. In the evening the temperature began to rise and went up to 102·4°; pulse very rapid (148), small and feeble; respiration 20, full and regular. The patient's general condition is worse than it has yet been. An ounce of brandy and five minims of tincture of strophanthus were given every three hours.

23rd.—Patient much improved to-day. Pulse slower, stronger, and fuller. The temperature came steadily down to subnormal. In the evening the patient was fed by the mouth for the first time.

24th and 25th.—Patient steadily improving.

26th.—Wounds in neck entirely healed up. Patient takes his food, and sleeps fairly well, but is still very melancholic and anxious that his life should be ended.

27th.—He was removed to-day to a lunatic asylum.

[1] Surgery, p. 360, 1889. [2] Vol. ii., p. 19.
[3] Index of Surgery, p. 105. [4] Science and Art of Surgery, vol. i.
[5] Holmes' Surgery, p. 194, 1889.

MORLEY HOUSE CONVALESCENT HOME.—This institution, situated at St. Margaret's Bay, near Dover, was founded for the sole benefit of London workmen, by members of which class it is also managed. It provides thirty-eight beds, four of which are maintained in the wing recently added for postmen by the gift of the salary accruing to Lord Wolverton when Postmaster-General. The Home is supported by collections at London workshops and grants from the Hospital Saturday Fund, in addition to the endowments arising from the gifts of the late Samuel Morley and the generosity of Lord Wolverton. On Saturday last about 400 working men from the metropolis visited the home, and, after inspecting the arrangements made for the comfort of the inmates, participated in various sports provided for their entertainment.

Medical Societies.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

Diagnosis and Treatment of Small Submucous Fibro-myomata of the Uterus.

A MEETING of the Obstetrical Section was held on May 24th.

Dr. BAGGOT exhibited a Myoma of the Uterus which had been removed that morning in the Rotunda Hospital by Dr. Macan, the means of removal being supervaginal amputation. Also two Ovarian Tumours, which were removed in the same institution. In the last two cases the patients had made perfect recoveries.

Dr. HORNE exhibited an Ovarian Tumour removed by Dr. Coppinger from a woman in the Mater Misericordiæ Hospital. The patient was about eighteen years of age. About six months ago, while running, she tripped over a stone trough and fell, striking her left side against it. At the time she did not feel much inconvenience, but on the following day she had a good deal of pain in the left lumbar region, and was obliged to go to bed, where she remained three days. She sought no medical advice at that time. At the end of two months she began to suffer from pain immediately under the left ribs, for which she sought medical advice. The doctor who examined her found a tumour lying immediately below the spleen. But what she remarked about the tumour was that when she stood up it fell down; but when she lay down in bed at night it rose up out of the pelvis, immediately under the left ribs. She only had pain at night, which prevented her from sleeping. As there was some doubt whether it was an ovarian tumour or a displaced or cystic kidney, Dr. Coppinger made an incision in the abdomen so as to see the tumour, which was not very much larger than an orange. He first made an incision of about two inches long. The growth was then high up under the left ribs, and he (Dr. Horne) had to press it down to the wound, where it was punctured by Dr. Coppinger, and removed without difficulty. It had a very large pedicle, which had allowed it to move freely over the abdomen.

The President (Dr. W. SMYLY) remarked on the diagnosis and treatment of Small Submucous Fibro-myomata of the Uterus. So long, he said, as the rule was generally accepted that in every case of severe uterine hæmorrhage not connected with existing pregnancy the cervix should be dilated and the cavities explored with the finger, the diagnosis of these tumours presented no difficulty; but since the introduction of the curette had rendered this painful and somewhat dangerous preliminary in the larger number of cases superfluous, it became of much interest to ascertain whether these new growths could be diagnosed without previous dilatation. Four cases were detailed showing that this was the case. The necessity for dilatation was indicated partly by the condition of the cervix and partly by feeling the new growths by sound or curette. In his opinion, dilatation of the cervix uteri was necessary only in order to remove small tumours, polypi, or portions of retained ovum. Large tumours should not be removed per vaginam, and hæmorrhage alone was not an indication. The method of dilatation which he now adopts is to commence with iodoform gauze, and, if necessary, complete the process with Hegar's dilators. The iodoform gauze is easily employed; it may be left *in situ* for three or four days, and is, therefore, especially adapted to the wants of the busy practitioner. In all the cases the tumours were removed by means of Schultze's spoon forceps. With this instrument diseased tissue alone is attacked, and, with ordinary care, no harm can be done; enucleation, on the other hand, is much more dangerous and difficult.—Dr. J. BYRNE said the great difficulty was to dilate the external os, and, after that had been done, there was as great difficulty in dilating the internal os. Iodoform gauze was a great improvement as a gynæcological appliance for the purpose.—Dr. MACSWINEY said the paper had dealt with several points of great importance to the specialist. Dr. Smyly objected, apparently on good grounds, to the practice of frequently dilating the os or cervix, except where he recognised a submucous, fibroid, or other polypus, or where there was ovular membrane, and he wished to know how would Dr. Smyly determine that the hæmorrhage was due to a tumour or some other condition.—Dr. KIDD observed that Dr. Smyly had said that some authorities preferred the knife to Hegar's dilators. In the case of a woman who had not borne children, if the knife were used, the difficulty of the operation would be enhanced by the hæmorrhage. He said one of the advantages of Hegar's dilators was that they did not occasion anything like the amount of hæmorrage that would occur if the cervical canal and os were opened with a knife sufficiently to admit of fingers being introduced into the uterus.—The PRESIDENT, in reply, said that the difficulty there sometimes was of distinguishing between incomplete abortion and the existence of fibroid tumours was one of the things that had induced him to write the present paper. In the fourth of the cases that he had narrated, the woman had been fourteen months married, had had an abortion, and her uterus was large and flabby; and therefore it was natural to suppose that the case was one of incomplete abortion. As to treatment in such cases, if the abortion took place before the fourth month, he would not use the dilator, but would simply scrape and wash out the interior of the uterus, and then inject it with either perchloride of iron or liniment of iodine. If the placenta had formed, the best course was to dilate and remove the placenta with the finger. It was common to split the cervix as far as the vaginal junction; but the division of the internal os with a knife was not very popular. He had no doubt that there would be more hæmorrhage when a knife was used than with a dilator, but he had had no experience of the two cases. Hegar's dilator was an excellent instrument when the os was already somewhat dilated; but if the cervix was rigid, the dilator was very apt to lacerate it, and in such a case it was better to begin with iodoform gauze, which was a very simple thing to use.

Notices of Books.

Die Chirurgische Behandlung von Hirnkrankheiten. Von ERNST VON BERGMANN. Zweite, vermehrte, und umgearbeitete Auflage. Berlin, 1889. Verlag von August Hirschwald.—This is an enlarged and revised edition of an article which originally appeared in von Bergmann's "Arbeiten aus den Chirurgischen Klinik der Königlichen Universität, Berlin." Although only two years have elapsed since this article was first published, considerable additions have been made in this second edition. These consist in additional cases, and also in an enlargement of the scope of the article. The subject is divided into five parts. In the first the Operative Treatment of Encephalocele is discussed. Two good cases of the removal of nasal or sincipital encephaloceles are given, one by von Bergmann and one by Schmitz of St. Petersburg. From these cases and from general pathological and clinical considerations, von Bergmann is strongly of opinion that sincipital encephaloceles ought to be submitted to a radical operation. This section is entirely new. Then follows a valuable article on the Pathology, Symptoms, and Treatment of Cerebral Abscess, which is well up to date, and contains accounts of his own cases and of others recently published in this country, in America, and on the Continent. The third section is devoted to a similar discussion of the Surgical Treatment of Intra-cranial Tumours. Trephining for Epilepsy is the subject of the fourth section, and the fifth and last is a brief article on Puncture of the Lateral Ventricle and Operations for the Diminution of Intra-cranial Pressure. In a case of severe tubercular meningitis marked by coma, slow pulse, Cheyne-Stokes respiration, fixed dilated pupils, and twitchings in one arm, von Bergmann trephined the frontal bone and tapped the lateral ventricle. The immediate effects were excellent; consciousness returned, the pupils reacted to light, the pulse and respiration became more natural, and all went well as long as the cerebro-spinal fluid continued to escape through the puncture. But this drain ceased, the serious symptoms then recurred, and the child died. Although not successful in saving the patient's life, this case was a strikingly encouraging one, and it shows that there is some

ground for hoping that tubercular meningitis even may be successfully dealt with by the surgeon. The whole pamphlet is admirably done and well worthy of careful study.

A *Guide to the Use of the Mineral Waters of Buxton.* By W. H. ROBERTSON, M.D. Twenty-third Edition, revised and enlarged. Pp. 65. Buxton: C. F. Wardley. 1889.—*Buxton: its Baths and Climate.* By SAMUEL HYDE. Pp. 134. Manchester and London: John Heywood. 1889.—The fact of Dr. Robertson's Guide having already gone through twenty-two editions, covering an issue of above 30,000 copies, may be taken as satisfactory evidence that it has been found to supply an acknowledged want. It contains full analyses of the waters and all the requisite information as to the means provided for their use, the cautions necessary to avoid injurious results from them, and the general regulations as to diet &c. which should be observed by persons taking a course of them. Dr. Robertson states briefly the diseases in which benefit may be expected, the cases in which the use of the waters is contra-indicated, and the means which should be adopted to fit the system, as far as possible, to derive the fullest benefit from them. It seems a useful guide, but a good index would add to its value.—Mr. Hyde's book seems more intended for the use of the public in general. It consists of two parts, the first giving a description of the locality in which Buxton is situated, its waters, and the several forms of bath in common use; and the second, a description of the town, its neighbourhood, and the excursions which may be made from it. As regards climate, Buxton appears to have a low average temperature, a high annual rainfall (about fifty-one inches); in winter much snow and frost, and no great amount of bright sunshine; but it is free from fog, and has a dry, pure air. Notwithstanding climatic drawbacks, Mr. Hyde is of opinion that it might be advantageously used as a winter health resort in cases of phthisis, instead of Davos-Platz and other Alpine resorts. The information he gives as to the various kinds of baths, and the chapter on "Massage, its Principles and Practice," may be found useful. But invalids and seekers after health should never forget that they are powerful for evil as well as good. "A popular notion prevails very widely that baths can be taken as a rule with impunity, and that it is not necessary to apply to them the usual principles which regulate the use of remedial agents. It must never be forgotten that baths follow the law as to action of all remedies for the relief of disease. They must be both prescribed and dispensed according to certain rules which should regulate the treatment of every case according to its individual merits." Mr. Hyde enumerates some of the diseases in which the waters are found beneficial, but we cannot find any caution as to those in which they may prove injurious. The book has the advantage of a good index.

Beiträge zur Pathologischen Anatomie und zur Allgemeinen Pathologie. Redigirt von Dr. E. ZIEGLER. Band V., Heft 1. Jena: G. Fischer. 1889.—With a new volume the editorship of this excellent publication passes solely into the hands of Professor Ziegler. It fully maintains its previous high quality, as shown by the contents of this first part:—1. C. Nauwerck and W. Barth (Tübingen): Pathological Anatomy of Landry's Paralysis. 2. C. Nauwerck and H. Eyrich (Tübingen): Verrucose Aortitis. 3. L. Caporaso (Modena): Regeneration of the Spinal Marrow of the Tail of the Newt (written in Italian). 4. W. Sachs (Königsberg): New Growths arising from Lymphatics in the Eye. 5. R. Schattenberg (Marburg): A Circumscribed Porencephalic Defect of the Brain in an Adult. 6. D. Fischer (Marburg): Lumbo-dorsal Rhachischisis with Spinal Curvature &c. 7. A. Kirchberg and F. Marchand (Marburg): So-called Fœtal Rickets (Mikromelia Chondromalacia).

Defects in Plumbing and Drainage Work. Described by FRANCIS VACHER. Illustrated; pp. 83. Manchester and London: John Heywood. 1889.—This volume, to a great extent a reprint of papers which have appeared in the *Health Journal*, treats of all questions relating to domestic sanitary fittings, drainage, and water service. It is divided into eight sections, in each of which Mr. Vacher first states the conditions under which the work treated of should be carried out with reference to sanitary considerations, and then gives a number of examples of the manner in which it too often has been, and still is, but never ought to be done. It contains many examples of what the author truly styles "perverted ingenuity," and curious particulars of ill-designed and scamped work. It makes one shudder to think of the risks to health and life people are compelled to run constantly from ignorance, carelessness and cupidity. Mr. Vacher has been careful to point out "what to avoid" in house construction, and, we may add, house-hiring. The book deserves to be studied by householders, medical officers of health, sanitary inspectors, and plumbers. One practical lesson we would deduce from it is: the imperative necessity for a careful skilled inspection of a house before coming under an obligation to rent it. It is difficult to estimate how much sickness and sorrow would be avoided were such a course invariably adopted

Die ersten zehn Jahre der Myringoplastik nebst Angaben verbesserter Methoden zur Heilung von alten Löchern im Trommelfell. Von Professor D. E. BERTHOLD im Königsberg. Berlin, 1889. Verlag von August Hirschwald.—It was in the year 1878 that Dr. Berthold first published an account of his attempts to close old perforations of the tympanum by a plastic operation. At that time he had used the rabbit's cornea for the purpose. Since then he has made two alterations in his method; first he substituted human skin for the rabbit's cornea, and now he uses the thin membrane lining eggs, and subsequently applies outside it spirits of turpentine. In this *brochure* he describes these different methods, refers to the cases published by other surgeons, and finally relates all his own completed cases. It is a method well worthy of the careful attention of aural surgeons, and they will no doubt be glad to have Dr. Berthold's facts thus put at their disposal.

MEDICAL CIVIL SERVANTS AND THE PENSION BILL.

To the Editors of THE LANCET.

SIRS,—The letter of your correspondent "Q" shows the need for a union of medical men holding civil appointments, and as I have been assured that a well-considered plan for such a union would be likely to find favour among those who are chiefly concerned, I should be glad if you would permit me to lay before the readers of THE LANCET the following outline of the proposed objects of such a union, and to state that I shall be glad to receive any suggestions or criticisms from those interested in the matter.

Proposed Association of Medical Civil Servants.

Objects.—1. To unite medical men holding office under the State as medical officers of health, Poor-law medical officers, medical coroners, police surgeons, post-office surgeons, also medical M.P.'s, in a society for mutual assistance. 2. To obtain the establishment of Poor-law dispensaries in towns wherever practicable, and the improvement of the position of medical civil servants generally. 3. To obtain the opening of Poor-law infirmaries and hospitals for purposes of medical study. 4. To advocate the appointment of a Minister of Health. 5. To watch all Bills brought before Parliament affecting the status or duty of medical civil servants.

I am, Sirs, yours faithfully,

H. NELSON HARDY.

Southville Park Villas, Dulwich-grove, S.E., August, 1889.

THE LANCET.

LONDON: SATURDAY, AUGUST 31, 1889.

EVERY fresh contribution to the pathology of malignant new growths is to be welcomed, as enabling us to gain further insight into the manner of their propagation and the best means of dealing with them. It may be long yet before any tangible result can be realised, although it is obvious that the aid given by microscopical investigation has been very considerable. For it is now practically certain that in their origin these formations are emphatically local; that is, that they are the product of a disturbance in the normal cell-nutrition of the particular organ or part where they arise. We have been forced to abandon the notion once so widely held, that the appearance of cancer was the expression of a general, constitutional, or blood state, and must look now to determine what it is in the individual that predisposes the tissues to undergo this remarkable alteration. For, in rejecting "constitutionalism" as the full explanation of the cancerous manifestations, it seems impossible to ignore the existence in many cases of some "predisposition" or defect in growth or nutrition, if the origin of cancer is to be adequately explained. But there is another and most remarkable property possessed by malignant growths, which is special to them, and to which they owe their destructive and fatal character. This is the property of infectiveness within the body, so that parts distant from the primary centre may become the seat of formations similar in kind to those of the original growth. Many have been the hypotheses put forward to explain this "malignancy," some of them highly ingenious and suggestive. The latest endeavour to bring cancer under the prevalent bacteriological doctrines (which seem to have explained so much that has hitherto been obscure in the pathology of infectious disease) has not been successful. It is, however, conceivable that the cancerous cells themselves may be the actual parasites, but how and why they can come to be so transformed from the normal cells of the body are points which are quite inexplicable, and hardly reconcilable with what is known in biological science. The opinion held by Dr. NORMAN MOORE, as expressed in his Bradshawe Lecture, is evidently akin to this. At any rate, he sees in the secondary formations the direct descendants of the primary growth, and happily pointed his remarks on the colonising character of cancer cells by reference to the migrations of human families. We believe, too, that in this he was within the truth; for, in spite of some cases in which long intervals of time have elapsed between the total extirpation of the primary tumour and the appearance of distal visceral growths, the histological characters of such growths, which often far exceed in extent the primary formation, reproduce the features of the latter; and, remarkable as the existence of "latency" is, there is no escape from the conclusion that the two sets of new formations are genetically connected.

The Bradshawe Lecture was based entirely upon the facts in morbid anatomy gleaned by the lecturer from his experience at St. Bartholomew's Hospital. Necessarily, therefore, some of his conclusions respecting the mode of invasion of certain organs, and the proclivity to distal dissemination of certain growths, may be modified by the study of a larger number of instances than he was enabled to cite. But, in the main, especially as regards some varieties—e.g., cancer of the œsophagus and stomach,—his conclusions are, no doubt, concordant with general experience. His observations bear out the general belief that the liver is the organ which is the most frequently infected secondarily, no matter in what region the primary cancer occurs; but it is especially remarkable, as showing how limited such growths are, that in only one of his nine cases of cancer of the colon was this gland involved. The comparative infrequency of the association of calculi with cancer of the gall-bladder and of the kidney is remarkable. But what will most strike the pathologist is, perhaps, the large series of cases of primary cancer of the lung, and of those of the heart and pericardium, which he was enabled to record. Such experience is, we venture to think, wholly exceptional; but it must be remembered that some of the former class were more, strictly speaking, mediastinal than pulmonary in their origin. With respect to nomenclature, Dr. MOORE perfers to deal simply with the two great varieties—carcinoma and sarcoma,—holding that the former include epithelioma, and not apparently regarding the view that carcinoma is a perverted *glandular* growth rather than a mere epithelial one. There is more reason in his discarding the time-honoured subdivisions of scirrhus, medullary, and colloid, which belong, as he pointed out, to the pre-microscopic era of morbid anatomy. The great preponderance of carcinoma over sarcoma in visceral new growths is striking; and it would have been still more obvious had the lecturer been enabled to include uterine cancer in his series. His deductions at the close of the lecture as to the probable duration of malignant growths in various parts of the body were also of interest; but on this head allowance must always be made for the site involved, the local destruction of an organ essential to the maintenance of life leading, of course, to a shorter duration of the disease than when this is implanted in a less vital region. His calculation of the duration of growths, from the period of extirpation of external cancers to the time of death from secondary involvement of viscera, gave an average period of rather more than two years; but in rare cases a far longer immunity even than the fifty-one months (the longest noted by Dr. MOORE) has been observed. The facts adduced in this lecture are capable of ample confirmation, and it would not be difficult for a collective analysis to be made by the co-operation of hospital pathologists based on the lines laid down by Dr. MOORE. For the purpose of accuracy, however, such an inquiry would have to be, as in all his cases, based upon the histological examination of the growths observed. At any rate, the attempt is worth making, in order that our knowledge of the natural history of cancer should be as secure and definite as it is possible to make it.

THE surgery of fractures of the neck of the femur cannot be said to be in a satisfactory state. These injuries are very common, and their results are serious. Not uncommonly life itself is lost, and permanent weakness and

lameness are a usual result. The progress noted in other departments of surgery has not reached this, and the want of special interest in the subject has no doubt been due to the difficulties besetting exact diagnosis and really successful treatment. The old classification of all fractures of the neck of the femur into intra-capsular and extra-capsular has been pretty generally given up. It is now recognised that, while such a classification may represent the actual facts in a minority of cases, it is inaccurate in the majority; and, further still, it fails to indicate the important and essential differences met with in these fractures. Instead of concentrating attention on the relation of the fracture to the capsule of the joint, the impaction or non-impaction of the fragments is now laid stress on, and this for an important clinical reason. Impacted fractures, unless becoming unimpacted, are found to unite by bone, and so to be attended with less serious results than the other kind. The great thing to avoid in such a case is any manipulation which can separate the two fragments, and therefore examination of the injured part should always be conducted in such a way that this accident cannot happen. Latterly Dr. SENN of Chicago has been trying to apply this knowledge to cases of unimpacted fractures. He first of all resorted to some experiments on animals. Having made subcutaneous fractures of the neck of the femur within the capsule, he drilled the fragments and fixed them in direct apposition by a steel pin and a bone nail. When this was done firm bony union was obtained. The attempt to apply this treatment to human subjects was felt to be an extreme measure, ill-adapted to the old and feeble patients in whom this accident is generally met; and it has now been shown to be wholly unnecessary, for the same end can be obtained by simpler and milder measures, to which no objection on the score of severity can be urged. The object aimed at is to reduce completely all unimpacted fractures, and to hold the fragments in such firm contact that a kind of slight impaction is produced and bony union obtained. For this purpose he fixes the limb in its corrected position by a plaster-of-Paris splint carried from the toes up the limb and the trunk as high as the eighth rib, and down the opposite thigh as far as the knee. An interval is left in the plaster case over the great trochanter, and a pad worked by a screw on a steel arch attached to the splint is applied over this interval. When the plaster is set, pressure is made in the line of the neck of the femur by screwing down this pad. By this pressure the two fragments, which by the perfect reduction of the fracture have been brought into apposition, are pressed together, and are held as securely as if they were transfixed by a pin. In the *Journal of the American Medical Association* for August Dr. SENN describes fully this mode of treatment, and he details several cases in which he has applied it. He recommends that the same means should be employed when the fracture is impacted, as a security against disimpaction under the influence of the rarefying ostitis which accompanies union. Only, in cases of impaction no manipulation should be made to separate the fragments, and no efforts made to restore the length or the position of the limb. By this treatment it is stated that bony union can be confidently anticipated, that patients can be got up within a few days of their injury and so avoid all risk of hypostatic pneumonia, and that in many cases complete restoration of the function of the limb can be secured in the minimum of time. In its present form it seems to be a method that deserves careful trial, and if in other hands it is found as practicable and as successful as in Dr. SENN'S, that enterprising surgeon will have conferred a great benefit upon a large class of aged sufferers for whom surgery has hitherto done but little.

THE Report of Lord CAMPERDOWN'S Committee has been published, and the *précis* of their recommendations, which has already appeared in the daily press, has been read, no doubt, with much interest by the medical officers of the Public Services. It would be premature to forecast, much less definitely pronounce, what their verdict will be. Meanwhile, we will endeavour to summarise as succinctly as we can the impressions that we have ourselves formed in regard to those recommendations. The recent history of the Army Medical Service can be put into a nutshell. The circumstances under which the Committee was appointed are pretty well known. Until the appearance of the Warrant of 1879 THE LANCET used to teem with communications of complaint from army medical officers, and the unpopularity of the service was attested by the fact that it was being emptied at one end by retirements, and no candidates could be obtained to fill their places at the other end. What would have been the result had become tolerably obvious: the Army Medical Service threatened to resemble a derelict ship. The authorities had to do something. A new and most satisfactory Warrant appeared. Coincidently with the publication of that Warrant the popularity of the service was restored, and for years subsequently complaints from medical officers were "conspicuous by their absence" as far as our columns were concerned; candidates were forthcoming in adequate numbers and of excellent quality. Then came the action of the military authorities in regard to the question of relative rank. It was abolished, for no possible reason that we can see; and why this was done has never been explained, and probably never will be. All that is known is that the head of the department was never consulted before that step was taken. The illogical and anomalous character of the proceeding was rendered more conspicuous by the fact that to this day the rank, position—all, indeed, that appertains to the Naval Medical Service—remains about what it was, and is regulated by "relative rank," and the officers are well contented.

On the action taken at the time by a considerable number of army medical officers there is no need to dwell. Our opinion was not apparently in accord with that entertained by the majority of those officers, especially by those of the junior rank. We have no desire to deny it. The question is, was the majority right? And will the recommendations of this Committee—probably appointed mainly to consider this rank question,—in respect of the hybrid military titles suggested by them, content the medical officers, improve their status in the service, add to the dignity of their professional calling, and enhance their prospects, material or social, or will they not? But let us suppose that these titles—by which we shall have surgeon-lieutenants and surgeon-captains, and a deputy surgeon-general will henceforth be known as a surgeon-colonel—are deemed satisfactory. What about the other recommendations? The Army Medical

Service is not a corps, be it remembered; it still remains a department. For our own part we regard this Report as unsatisfactory and impracticable; and we think the Medical Service will regret that the Committee ever sat, for all the good it will do. The medical officers in the upper rank are, it is proposed, to serve for two years longer than they do now, by which the promotion of all the rest would be retarded in all grades of the department. A medical officer now enters with the rank of captain, whereas he would hereafter rank as lieutenant for the first three years of his service. This is to apply to the Army Medical Department, but not apparently to the Indian and Naval Medical Services! This, however, is probably simply an oversight on the part of the Committee, as such a regulation would cut off a supply of candidates for the army. It is recommended that medical officers should commence their service in, and be attached to, regiments for some definite period, a recommendation to which there can be no objection, except this—that it has hitherto been deemed financially impracticable; and the late reductions in the Medical Service have, it seems to us, rendered this still more so. If the civil medical element of this country is to be utilised to an increased extent, as suggested, it follows that this period of home service for medical officers will be shortened, instead of increased. Surgeon-General BALFOUR'S remarks in his protest on this subject are very pertinent. The substitution of officers on full pay to fill half-pay appointments will surely prove more costly. Some of the recommendations are no doubt fair and just enough, and meet with our entire approval; but they do not, after all, go to the root of the matter—at any rate, in this respect: that there is, literally, no reward for professional services, or for scientific attainments or professional culture, however conspicuous.

One word in conclusion. The Report of Lord CAMPERDOWN'S Committee is published; but what about the evidence on which the Committee drew up their recommendations? Is that to be published?

THE disclosures which have resulted from the appointment of a Commission of Inquiry into the Sweating System as carried out in this country must have prepared the public mind to receive with welcome any reasonable and effectual measure of reform. The Bill recently introduced into Parliament by Mr. BAUMANN does not therefore come altogether as a surprise, notwithstanding the drastic nature of some of its provisions. We may remind our readers that it proposes to extend the operation of the Factory and Workshops Act of 1878 to establishments hitherto exempted—namely, to domestic workshops (i.e., those in which members of the resident family are alone employed), and to workshops which do not give occupation to children and young persons. These it will at once be seen are the very shops in which sweating is most prevalent. Hitherto the right of mere entry by factory inspectors has been so carefully guarded by restrictions as to be of little real service, and the remedial power entrusted to these officials in dealing with any proved nuisance has consisted in an appeal to the local sanitary authority. By the terms of the new Bill it is proposed to allow the inspectors a right of free access to any dwelling used as a workshop, and authority to set in motion for themselves the legal machinery available for the correction of abuses. While deprecating the necessity for any such legislation as is contemplated by this Act, we confess that, in the absence of any spontaneous movement among tradesmen towards a voluntary adjustment of the existing difficulties, we can suggest no other alternative. We have repeatedly maintained, and we still maintain, that legislation in such matters, unless it be accompanied by active supervision, is of little value. It may seem to some that the Bill interferes unduly with the relations between employers and employed. This, however, is not the case. Its introduction is a simple consequence of existing mismanagement, and a protest which has long been called for in the mere interest of public health. Where the principle of "live and let live" is mutually recognised, the Bill will be practically inoperative, and employers who chafe at its restrictions will usually be found to be such as have rendered themselves liable to its needful control. A short Bill which proposes to limit the hours of underground work in mines to eight hours daily is likewise at present under consideration. The purpose of its promoters is good, but it is, perhaps, open to doubt whether a reduction of the nine hours' limit would result in any real advantage either to the health and well-being of the workmen or the interests of trade.

THE Infectious Diseases Notification Bill has been run through Parliament in a way that is not fit. The principles it involves and the details which it enacts were alike deserving of more consideration than it was possible for them to receive from members in the last weary days of a long session. It has been known for weeks that the Minister in charge of the Bill insisted on the dual notification, and that he would rather give up the Bill than pass it without making the medical attendant a party to notification. We have done our part to save the medical profession from this inconvenient and irksome duty. We have done this as much in the interest of the public as in that of the profession, believing that it was better to require of the medical man simply the certification of the nature of an infectious case, leaving the whole business of notification to be done by the householder. This plan should, at any rate, have been tried first. Had it failed, the profession would willingly have agreed to the dual system. But the Government have forced the Bill through in a way which we regret. Sir WALTER FOSTER, who raised the question of single notification, saw the way in which the Bill was to be passed, and abandoned the conflict, perhaps too quickly. Of course medical men will do their duty and obey the law, but it would have been better policy to have shown a little more regard for their feelings and their views of what is at once right and expedient. A minister at the tail end of a session is master of an obedient majority, but their obedience should not be abused; and it is within our knowledge that members of Mr. RITCHIE'S own party do not approve of this Bill or the way in which it has been passed. One suggestion of ours he showed himself willing to adopt, that it should be made of general obligation, and not dependent on the action of local authorities. But this concession, in the hurry scurry of legislation, had to be abandoned, and we have the anomaly of neighbouring communities being at liberty either to accept or reject this notification system, so that the good of notification in one place is largely neutralised

by its absence in another. Mr. RITCHIE was willing to let off any place as regards adopting this measure, but he would on no account exempt the medical man from the duty of notification where it is adopted. This, we repeat, is much to be regretted.

One thing is remarkable in this legislation: the slight resistance which politicians of advanced views have been able to offer to its fundamental principle—viz., the right of the community to insist on knowing the affairs of individuals and families where these are likely to involve in any degree the health of others; in other words, the subordination of the individual to the community. This is of course the fundamental principle of society, but it is ever undergoing fresh development. National education, vaccination, isolation, and notification of disease are all illustrations of the same principle. Strange to say, the inhabitants of Leicester are quite ready to enforce notification and its consequence—isolation,—while they shrink from compulsory vaccination. We have ourselves no hesitation in accepting the principle that individual liberty must give way where such doubtful advantages as the freedom to have small-pox and scarlet fever are the only badges of liberty. And it will involve no misfortune to the world if many other rights claimed by well-meaning but discordant individuals are curtailed in the interests of society.

Annotations.

"Ne quid nimis."

THE STUDY OF THE HISTORY OF MEDICINE.

MR. LLOYD OWEN'S address on the Value of the Historical Study of Medicine (*Birmingham Medical Review*, July) points to the profit and pleasure obtainable from such a study, which assists in maintaining definitely the idea of continuity with the past, and he regrets the lack of opportunity afforded in our medical centres for the pursuit of this subject. A just estimate of the failures of the past would, he maintains, correct the "restless and unwholesome desire for novelty which is one of the weaknesses of the present age"; and we are inclined largely to agree with him. An infinity of trouble and ingenuity would be saved if the medical profession could take more to heart the lessons gained in bygone days, in matters of practice as well as in matters of theory. Even the Asclepiadæ (500 or so years B.C) were careful to select salubrious sites for their temples, where the treatment of the sick and clinical instruction were carried on. In very early times also the profession had to be protected by legal safeguards from unqualified practitioners; but Mr. Lloyd Owen thinks that the physicians of those days were less devoted to the service of man at their own risk than at present. He singles out from the writings of Hippocrates the statement that all diseases are "alike divine, for each has its own nature, and no one arises without a natural cause"—an idea which, had it been fully grasped by his successors, would have made the progress of medicine far more rapid. He alludes also to the advice given by Hippocrates to make the basis of preliminary education as wide as possible; so that in urging this now we are only following in the path of the ancients. Specialism, he shows, is as old as medicine itself, for "Herodotus tells us that among the Egyptians each physician applied himself to one disease only. All places abounded in physicians—some for the head, others for the eyes, others for the teeth, others for the parts about the belly, and others for internal diseases." The influence upon medicine of prevailing philosophies is illustrated by its association in mediæval times with alchemy, Rosicrucianism, and magic, which gave way to rational and experimental methods based on anatomy, physiology, and the natural sciences. Mr. Lloyd Owen deserves thanks for directing attention to this neglected subject, which he claims to have real, practical, and also moral advantages; and he urges the establishment in every University and every medical school of a professorial chair of the History of Medicine, suggesting that such a course might most fitly be taken by the student in his final summer session, or, failing that, that it should form part of a post-graduate course. The suggestion is one which merits the fullest consideration, and we would urge the universities to institute such professorships. There are several members of the profession who could most ably discharge the duties of such chairs.

DEATH OF A HOUSE SURGEON FROM DIPHTHERIA.

WE regret to have to record that another house surgeon, Mr. Charles Brown, M.R.C.S., L.R.C.P., has succumbed to an attack of diphtheria contracted during the course of his duty. He had held the post of house surgeon at St. Thomas's Hospital for nearly the full period of time for such appointment, and had become out of health in consequence of close application to the duties of his office, so that he fell a more ready victim to the disease, which assumed a very malignant type. He had assisted in the performance of tracheotomy in a case of diphtheria two days before his illness developed, and had been in attendance on the case afterwards. On the morning of the 21st he suffered from sore-throat, but was able to do his work, and assisted at another tracheotomy for diphtheria; about midday, however, he became suddenly very ill, with frequent vomiting, rigors, intense headache, and pains in the limbs. In the evening the temperature was 102·5°. On the 22nd there was great œdema of the palate and fauces, and membrane was visible in the pharynx. On the 24th he was unable to swallow on account of the pain and swelling in the throat. By the 25th the membrane was spreading across the palate, and there was a discharge from the nose. He coughed up a cast of the trachea and shreds of membrane. Air did not enter the lungs well; there was some lividity of the face, and a trace of albumen in the urine. In the evening he was better, and was able to swallow fluids well, but rapidly became worse at 11 P.M., and passed into a state of unconsciousness with stertor and laboured breathing. Early on the following morning (the 26th) laryngotomy was performed, but no improvement followed the operation, and he died at 3 A.M. The illness throughout was of a malignant character and attended with much loss of strength. He was under the care of Dr. Hadden, who, with Dr. Turney (house physician), was in constant attendance. Mr. Pitts performed the operation. Mr. Brown had been a prosector to the Royal College of Surgeons, and had held other offices at St. Thomas's Hospital, having been assistant demonstrator in Practical Surgery, clinical assistant in the Throat and Ear Departments, and assistant house surgeon. His death has cast quite a gloom over the hospital, in which he was so well known and highly esteemed for his excellent qualities, both professional and social. Our readers will recollect that last year we had to record the death of a house surgeon at Guy's from this cause. Diphtheria is a serious risk to men holding such appointments, who are necessarily exposed to the disease, and we would urge on those having authority the wisdom of sending the house surgeon away at once when evidently suffering from the effects of too close application to duty. A suggestion of rest and change

of air, much as it may be needed, will not come from the house surgeon, who would rather go on as long as he is physically able to perform his duties.

A correspondent (C. T. Q.) writes in reference to the above sad event as follows:—"Other and weightier pens may bear their witness to the excellence in professional work of the late Charles Brown, to his steadfast, honest, and brilliant student career, and to his success as house surgeon to St. Thomas's Hospital, at which post he met his death. But as one very closely associated with him for many years I would speak of his character as a man. To all alike—staff, colleagues, and patients—he was the same, courteous, gentle, and sympathetic, and amidst the rivalries, fierce at times in a great hospital, was only regarded with friendship and admiration. His more intimate friends cannot yet realise that they are robbed of his genial presence, and that his voice, so often charming us with a wit peculiarly his own, is stilled for ever. He had exceptional musical talents, exercised first in the choir of the Chapel Royal, Whitehall, later on as organist at St. Mark's Church, Wandsworth, and quite recently in the same capacity in the Hospital Chapel. At one time Music had nearly claimed him as a student; but Medicine won him, heart and soul; for her for many years he lived, and for her he died."

WARM BATHS IN TYPHOID FEVER.

DR. ANUSCHAT advocates, in a communication to the *Deutsche Medicinal Zeitung*, the employment of warm baths in typhoid fever in place of the cold water, to which the patients often evince such a great objection that they refuse to re-enter the bath. He disputes Brand's doctrine that the good effect of the cold bath is due solely to the low temperature, as in that case it would be equally advisable in all acute fevers. Dr. Anuschat believes the beneficial effect to be due to the water rather than to its temperature, and his view is confirmed by the results of 150 cases which he has treated with the warm bath. He administers three baths daily, from fifteen to twenty-five minutes each, at 95° F. if the temperature of the body is between 100·4° and 100·2°, at 93° if the body temperature is 102·2° to 104°, and at 90·5° only if the temperature of the body is higher than 104°. In most cases a perceptible improvement takes place in three days, with decrease of fever, but the good effect of the warm-bath treatment is most plainly seen in the almost entire absence of secondary symptoms and the much shorter duration of the illness. Of 150 patients, 145 were less than four weeks confined to bed, and most of them less than twenty-one days. When the temperature of the body falls below 99·5° the bath is administered less frequently. The treatment—medicinal, dietetic, and stimulant—recommended is much the same as that generally prescribed.

THE CRUELTY TO CHILDREN BILL.

AFTER a somewhat uncertain course the Prevention of Cruelty to Children Bill has passed both Houses of Parliament, and has received the Royal sanction. The new Act, if administered with reasonable energy, should prove a most useful measure. It increases greatly the power of the law in dealing with the careless or wanton ill-treatment of children. A special and heavy fine and a term of imprisonment will be exacted in any case where the life of a child so used has been insured. The responsibility for any proved instance of cruelty will rest upon the temporary custodian of the child, whether a relative or not. On the other hand, it will be lawful to transfer children from the custody of a harsh guardian to various other persons defined by the Act. So much for the general treatment of the children. Another important section is that which deals with their occupation. Child-begging will be held to be an offence on the part of parents or guardians, and juvenile hawkers will be placed under the control of local authorities, the liability for offences against the terms of this Act resting upon the employers of these children. No child under ten years of age will be allowed to labour for profit, except in particular cases where the employment of younger children in theatres under the supervision of factory inspectors is permitted by special licence. Any person observed ill-treating a child in any way is liable to summary arrest, and incurs the statutory penalty. Children who are called upon to give evidence against their parents in respect of cruelty may be removed from their custody pending the hearing of their case. A statutory oath will not be required of them. The evidence of one parent against another will be accepted, and the accused may give evidence on his own behalf. This brief recapitulation will suffice to show that we have here an Act both temperate and effective, and one which cannot fail to add greatly to the now very stinted happiness of many young lives.

ACCIDENT INSURANCE.

THE two actions in which the Accident Insurance Company has successfully resisted claims made under its policies will redound, no doubt, to its immediate advantage, inasmuch as it escapes a present liability for sums amounting in the aggregate to £2000; but we should think that it will suffer, and not it alone, in public estimation, as the result of the exactitude with which it has stood upon its rights. In one case (Cornish *v.* the Accident Insurance Company, Limited) the claim was resisted on the ground that the policy-holder had incurred obvious risk, the fact being that he had incautiously crossed a railway passing over his land immediately in front of an approaching train which it is supposed that he did not see until too late. It is of course quite reasonable that the Company should refuse to take a risk of this sort if the limit of its responsibilty is clearly understood. The class of accidents to which the negligence of the sufferer contributes is perfectly distinct from that still larger class of such as arise from circumstances wholly beyond his own control, or as consequences beyond the range of calculation of his own acts. If the parties to the insurance contract choose to exclude the former class of accidents from their agreement, there can be no reason why they should not do so. But such a policy is probably a very undesirable one for ordinary purposes. Negligence is an item in so many accidents that the policy-holder who is not protected against its consequences is but very indifferently secured. On the other hand, wilful negligence or the fraudulent submission to personal injury is not only very rare, but generally capable of all the proof necessary to secure a company against any unreasonable risk. In the second case (Cole *v.* the Accident Insurance Company, Limited) death had ensued from the inadvertent drinking of a solution of corrosive sublimate. The accidental character of the occurrence was not disputed. The policy-holder had gone with a lighted candle into a stable for the purpose of taking a dose of some medicine kept there. The candle had been blown out by a gust of wind, and the deceased, groping in the dark for his medicine, took down a bottle of horse-lotion in mistake for it, and dosed himself, as already mentioned, with corrosive sublimate. The plea in this case was not obvious risk, but poisoning, for it appears that the Company's policies contain a proviso to the effect that the Company shall not be responsible in the case of death from poison. This seems to us to be an absurd condition, and one that no sensible person would knowingly accept. In delivering judgment in favour of the Company, the Master of the Rolls is reported (*The Times*, Aug. 10th, 1889) to have said that "he had a prejudice against this policy, and

it was an honest, right, and judicial prejudice. When he saw a policy which ordinary people would consider insured them against accident, and when he saw that the policy was drawn in such terms that it would not secure them against almost every kind of accident, it was a policy not to be praised, and people ought to be warned against insuring under policies in that form. This policy was one that might deceive persons of ordinary intelligence." These are undoubtedly strong comments, and we notice that they called forth a disclaimer from Lord Justice Bowen, who said, "As he was unable to agree with the observations made by the Master of the Rolls upon this policy, he considered it a matter of justice to the Company to say so"; but, for our own part, we are bound to say that we strongly feel what the Master of the Rolls so forcibly expressed.

ENTERIC FEVER IN NEW SOUTH WALES.

MANY places in our Australasian colonies have for some years past suffered much from enteric fever—the disease which, of all others, is typical of an imperfect sanitary administration; and several colonies have decided that very stringent measures as to water-supply, sewerage, drainage, and excrement disposal must be taken in order to get rid of this highly preventable scourge, which is so fatal in its influence on life at the young adult period, when life can least be spared. One recent contribution dealing with this subject comes from Dr. Ashburton Thompson, deputy medical adviser to the Government of New South Wales, who, together with Mr. George H. Stayton, Government engineer, reports on enteric fever in New Town and Macdonaldtown. To those acquainted with the conditions which favour the spread of enteric fever the report will only cause amazement that, under conditions of life so different from those which we have in this country inherited from an ignorant age that is now passed, circumstances so obviously tending to the maintenance and diffusion of this filth-disease, can have been allowed to grow up in such abundance. It almost seems that the Government have not as yet even secured proper powers for dealing with such matters in a comprehensive and systematic manner. If this be so, it is to be hoped that the force of Dr. Thompson's trenchant and timely exposition and warnings will be recognised in such manner that preventive measures may be put into operation without further delay.

NO ONE RESPONSIBLE.

THE story elicited at a coroner's inquest at Grove Park, Lee, affords an illustration of the manner in which responsibility for conditions fatal to health and life is shifted about from one person to another. An infant has its milk mixed with water from a filthy pond; it has diarrhœa and dies. It then transpires that all the family drink the water, that all have been suffering from diarrhœa more or less, and that the water is used in other households also. Mr. Larkin, having frequently had to attend people who were sick and who used this water, very properly brought the matter under the notice of the coroner, and at the inquest no one seems to have regarded himself as the person responsible for a condition that ought to have been notorious to all concerned. The water was found to be green in colour, and full of tadpoles, animalculæ, and filthy impurities; but the sanitary inspector for Lewisham, who said he had been in office for ten years, knew nothing about it. Evidently no house-to-house inspection, with the corresponding record of local sanitary conditions, is made in this district. Then came the representative of the nobleman to whom the property belongs, and he, too, knew nothing about it; and, indeed, he disclaimed the intention of making any speech "of the nature of a defence." The medical officer of health had also apparently no knowledge of the matter, for it was announced that his attention should be drawn to it, and the inspector added that a sample of the water should now at last be submitted to an analyst. So far as our knowledge goes, the sanitary authority, their officers, and the landlord all have a very definite responsibility in the maintained use by cottagers of such a water-supply, and this the more so because of the occurrence taking place within a few miles of London-bridge, and in a place where the Kent company's service is available. The danger as to improper water-supply does not appear to have been limited to the cottages alone, for the attention of the inspector of dairies and cowsheds under the London County Council has now been directed to the matter, and it was only on this assurance, coupled with the promises made by the sanitary inspector and representative of the landlord, that the jury decided, on the advice of the coroner, to close the inquiry by finding a verdict in accordance with the medical evidence.

WILD FLOWERS BY THE (RAIL)WAYSIDE.

WE are pleased to notice in that bright and pleasant little periodical, the *Selborne Magazine* (for August), a contribution from our friend Mr. Henry Smith, who has frequently shown how devoted a lover he is of nature, and whose contributions to natural history are known in some circles as widely as his surgical performances are known amongst his professional brethren. The article in question is descriptive of the varieties of wild flowers to be seen on railway embankments, and contains some suggestive remarks as to the operation of the law of natural selection in the kinds of plants met with according to the nature of the soil and situation of the embankment or cutting. As Mr. Henry Smith observes, the tedium of a long journey may often be relieved by the observation of the floral display that passes before the traveller's eyes, and he is justified in his preference for the wild profusion of the "negligence of nature" to the trimly cultivated garden. Railway travellers cannot do better than follow his example, and cultivate their powers of observation in preference to limiting their range of vision to the pages of a book or newspaper. The same number of the *Selborne Magazine* also contains an instalment of "Reminiscences of Charles Waterton," by another well-known member of our profession, Dr. George Harley.

THE LUNGS AND LIVER IN PHTHISIS.

DR. PLESHIVTSEFF (*St. Petersburg Dissertations*, 1888–9, No. 85) has weighed and measured the lungs and liver in eighty cases, forty-eight of which had died of phthisis. These weights and measurements are, in the tables he gives, all reduced by calculation to a common standard of height—viz., 100 centimetres. Thus, in the body of a woman 150 centimetres in length, all the weights and measurements are reduced to two-thirds of their actual value. In this way a fair comparison may be made between bodies of different sex and size. The total volume of the lungs in phthisical subjects was found to bear to that of non-phthisical subjects the ratio of 2414·8 : 2107·5; the volume of the liver in the two classes of cases had a ratio of 1404 : 1270. The lumen of the aorta was greater in the phthisical cases than in the others in the proportion of 65 : 79, and the circumference of the bronchi in the proportion of 70·8 : 81·1. Another table gives the ratio of the circumference of the bronchi and pulmonary artery to the volume of the lungs, and of the circumference of the portal vein and of the hepatic artery to the volume of the liver. The mean results obtained were that, in the phthisical cases, the bronchi were 1-29th and the pulmonary artery

1·34th of the lung volume. (The one measurement is linear, the other cubic, but this does not affect the comparison which the author wishes to draw.) In the non-phthisical cases the fractions were 1·25th and 1·29th respectively. The mean circumference of the portal vein was 1·36th of the volume of the liver in the phthisis cases and 1·30th in the others. The hepatic artery was also relatively smaller in the phthisis cases, being 1·46th in them and 1·32nd of the volume of the liver in the others.

REPUTED CASE OF HYDROPHOBIA.

THE great interest which has been taken in the subject of hydrophobia outside the medical profession was sure to lead to simulation of the disease, at all events as regards some of the more marked symptoms. A recent example of this was quoted as a real case, arising under circumstances of a peculiar character. The main facts appear to be that a man, who had taken "three two-pennyworths of gin, suddenly fell down in the hotel and became very violent." About half-past five he began to breathe heavily, when the sound resembled the growling and barking of an infuriated dog. He snapped at and tried to bite the persons surrounding him. He was then conveyed in an ambulance to St. Thomas's Hospital, where he continued violent, vomited, and had attacks of shivering. When admitted to that hospital there was slight inspiratory stridor, and falling water irritated him; once there was opisthotonos. After two days in bed and treatment with bromide of potassium he quite recovered. The possibility of hydrophobia was only suggested to the hospital authorities, as the man said that he had been bitten by a mad dog seven weeks previously. Six weeks before this there had been another similar attack treated in the infirmary. He appears to have been placed in the strong room, but left at the end of three days. He said that he had had three other fits at long intervals. We recollect having seen a man enter a crowded out-patient department on his hands and feet, barking like a dog; the other patients scattered themselves to the right and left to escape the supposed madman, and were much surprised to see him walk away in a few minutes, quite recovered from the attack.

SCOTTISH FISHERY.

THE seventh report of the Fishery Board for Scotland shows that this important industry continues to develop, and upon the whole satisfactorily. It may well be doubted, however, whether better improvement might not be looked for than the Board is able to report. The problem of feeding the multitudes cannot be solved without the help of the fisherman; and, though much has been done in recent years to aid and extend the fishery industry all round our coasts, we cannot but feel that, alike on the part of the public and of the Government, there is some lack of appreciation observable in reference to the inestimable boon of proffered food which the sea tenders on our shores. For example, reference is made in the present report to a systematic extension of the telegraph system to remote fishing districts which the present Board has undertaken, and the district of Barra is particularly mentioned by way of illustration. Here we read that in 1884 the cable was extended to Castle Bay, Barra, under a guarantee given to the Postmaster-General by Lady Caithness and the Board, "which has cost the Board upwards of £500 a year for their proportion of the loss consequent upon the extension." The report goes on to show that this cable has been invaluable to the fishermen at a time of emergency during the past year, as may well be supposed. With the fact stated, and with the substance of the comment upon it, we have no fault to find, but it does appear to us that the pointed reference to £500 a year in connexion with so necessary a part of the equipment of the fishing village betrays a little disposition towards cheese-paring, which is, indeed, characteristic throughout of the relations of the Government with the fishing community. Were fish a costly luxury, the men who win it would receive more respect and consideration than they do; but, since its cheapness is its greatest merit, there is something both ungracious and blind in the tardy and apathetic attention which the craft of fishery receives at the hands of the public and their official representatives.

FAITH CURES AT LOURDES.

MORE miraculous cures are reported from Lourdes. Two of these in particular have lately attracted attention; in one case a navvy paralytic in consequence of an accident, in the other a girl blind for two years, having, it is stated, recovered the use of their suspended functions. We are not disposed to deny the possibility of "miracles." On the contrary, we will venture to assert that in some sort or other they happen every day, and almost everywhere; for while the world endures we are certain to hear the true saying that "wonders will never cease," and a miracle professes to be nothing more than a wonder among the processes of nature. The wonders of the grotto at Lourdes are similar to those with which faith healers in this country have made us familiar. It will be noticed that they have arisen out of the same fertile soil—the mutability of a diseased nervous system. It must not be forgotten that nerve pathology includes many cases in which the distinction between functional and organic disease is by no means well marked. Yet the difference is an important one. Under the former title are included a variety of unstable morbid changes capable of rapid and even total transformation; under the latter, a group in which the possibilities of improvement are inversely proportional to the organic alteration. Such evidence as can be gleaned from the practice of the faith cure, equally with the clear testimony of scientific fact, forbids us to doubt that the wonders wrought at Lourdes owe their occurrence mainly to the influence of the sufferer's will, refreshed by hope and acting on the sources of non-organic paresis. Such an explanation is acceptable both by faith and science. It does not destroy the "miracle." The wonder still remains, but its mechanism is seen to be natural, and thus, in the words of the apostle, "the things which are invisible are understood by the things which are made."

PATHOLOGICAL CHANGES IN THE RETINA IN CEREBRAL AFFECTIONS.

DR. I. S. FELSER, late chief of Professor Adamiuk's ophthalmological clinic in Kazan, who has recently been engaged in researches on the pathological anatomy of the eye in St. Petersburg, publishes some of his results as a graduation dissertation (*St. Petersburg Dissertations*, 1888–9, No. 61). The cases he examined post mortem included examples of several cerebral affections. A number were cases of meningitis (tubercular and simple), and in all of these there was effusion into the sheath of the optic nerve, with œdematous neuro-retinitis. There were also cases of chronic meningitis, of arterio-sclerosis of the brain, and of cerebral hæmorrhage. The results of the examinations appeared to show that all diseases of the brain and its membranes, with impairment of its general structure, are accompanied by signs of acute inflammation with œdema of the optic nerve and retina. Chronic inflammations of the cerebral membranes were found to produce diffused chronic retinitis. Arterio-sclerosis of the cerebral vessels was found to extend to the vessels of the optic nerve and retina, and always to induce peripheral œdema of the latter,

this œdema being considered by Dr. Felser to arise from chronic venous hyperæmia, on account of the general interference with the circulation. Where there was arteriosclerosis of the brain together with extravasation of blood into the substance of the brain, there was always found extravasation into the retina, due to the formation of capillary aneurysms of the branches of the central artery. The so-called "Stauungspapille" (choked disc) are to be explained by the compression exercised on the optic nerve at its exit by the accumulation of pathological fluid under its sheath.

ANATOMICAL APPEARANCES RESULTING FROM POISONING BY ARSENIC.

AT the close of a paper on the above subject, read before the Massachusetts Medico-Legal Society (*Boston Medical and Surgical Journal*, Aug. 8th), Assistant Professor F. W. Draper, M.D., makes the following instructive remarks:—

"Is post-mortem diagnosis of arsenical poisoning an easy matter? That is to say, assuming ..... that we are in the presence of a dead body of whose clinical history we know nothing, are the revelations of the autopsy sufficiently characteristic and unequivocal to warrant one in concluding readily that the death was by arsenic? The answer is in the affirmative, upon the single condition that the data are studied in their associated relation, and that their collective significance is the evidence which guides the examiner. There is no single organ whose testimony is sufficiently conclusive to control the diagnosis, with the possible exception of the finding of deposits of the poison upon the gastric mucosa, with a marked degree of inflammatory redness beneath and around them; but, short of this, the condition of the stomach, however striking its inflammatory character may be, is suggestive only, the various degrees of irritant effects being explainable by numerous causes other than arsenic. But when, in addition to the presence of gastritis, the pathologist finds fatty degenration of the heart, kidneys and liver, a fluid and dark condition of the blood, and subendocardial ecchymoses, he may with clear conscience testify in court that he is of the opinion that the death was by arsenic. In this conclusion he would probably be confirmed by the results of a properly conducted chemical examination of the viscera. Indeed, without the gastric and enteric data, or with only an insignificant and equivocal degree of inflammatory reddening of the mucous membrane of the digestive tract, the concurrence of fatty changes in the heart, kidneys, and liver should arouse the examiner's suspicions, and suggest to him the propriety of seeking the chemist's aid to verify his surmises."

CLIMATOLOGY AT THE VATICAN.

WITH an enlightened liberality not always associated with the tiara, the Pope has taken steps to put the Meteorological Observatory at the Vatican on a thoroughly scientific basis, and has entrusted the undertaking to the Padre Denza, one of the leading climatologists in Europe, who will also assume the direction of the establishment when completed. As subordinate coadjutor, the Padre Laix will take the next position on the effective staff of the Observatory, which will thus be entitled to rank as the best equipped institution of the kind in Italy. To enter on his new office, the Padre Denza must resign his post as Director of the Royal Italian Observatory at Moncalieri, near Turin, and in this transference of his services from King Humbert to Pope Leo "political meteorologists" have already found food for congenial speculation. The Pope, however, in matters of pure science has more than once evinced his absolute unconcern as to their presumable bearings on policy. In fact, he has just authorised the Padre Denza to represent him at the Meteorological Congress to be held next month in Paris, thus dissociating himself from other European potentates (Catholic as well as Protestant) who decline to recognise the claims of science when put forth concurrently with the celebration of the anniversary of the French Revolution.

TONGUE-TIE.

DR. TASSIUS of Berlin, in a communication to the *Memorabilien*, makes himself responsible for some novel views on the propriety or otherwise of incising the frænum of the tongue. He says in his introductory remarks that the little operation has often been performed without considering that other and deeper causes, especially those connected with the general development, may be accountable for the faulty development of speech than the mere size of the frænum. He considers that this tiny and admirably constructed organ is a correct regulator of the various movements of the tongue, and that, if the same be too hastily interfered with, the more delicate movements may be for ever destroyed—a momentous fact for those who are destined to become public singers. He advises his medical brethren, therefore, to proceed very cautiously, and not to operate at too early an age, as much improvement may result from the advancement of general development. Only in those cases in which the frænum is so abnormally large and tendinous as to cause a fissure in the tip of the tongue may the incision be made at once, but it should be calculated almost mathematically what proportion the depth of incision should bear to the fissure. The author deprecates, therefore, the use of scissors, as not to be depended on, but advocates the employment of a small knife, the incision to be made from below upwards. Where the frænum is of a fleshy character, and it is, consequently, certain that the child will never gain distinction in singing or elocution, there is, according to Dr. Tassius, no cause at all for immediate interference, unless the deformity causes a real impediment. It is far better to leave such cases—at any rate, for some time—entirely to the *vis medicatrix naturæ*.

THE DOCK STRIKE.

THERE seems to be a pretty general agreement of opinion that the present strike of dock labourers is not merely a fretful outburst of wanton discontent, but is founded to some considerable extent on the existence of real grievances. We have already shown, in the report of THE LANCET Special Commission, Dec. 8th, 1888, that the life of these men is, in a greater degree than that of many workmen, one of hardship, irregular employment, and insufficient pay. Accidents are exceedingly common, and often serious. In a good many cases they might, with better oversight of the modes of working and of the gear employed, be avoided; and they are often also the preventable consequences of sheer weakness in men irregularly occupied, underpaid, and therefore underfed. In these circumstances, it is easy to understand why the sympathy which is felt for this class of workmen exists as a general impression in different sections of the community. Many persons, who may not be able fully to appreciate the import of their specific demands, feel that, at all events, some substantial concessions are necessary. In this, doubtless, as in every question, the interests of both parties in the matter have to be considered. Some allowance is due to the dock companies as well as their *employés*. Neglect and accident will occur under the best management; irregularity in work may be a consequence of personal incapacity or sheer laziness; and wages must to some extent be regulated by considerations of a dividend. Still, after every allowance, it must be admitted that grievances do exist, and it is to be hoped, as much for the companies' credit as for the good of their workmen, that these will be remedied by adequate and

early concessions on the part of the former. The one objectionable feature in all strikes—the practice of preventing by intimidation or by force the employment of substitute workmen—has not been so offensively prominent on this as on some other occasions. A tendency towards its adoption has, however, been more than sufficiently apparent, though, we may reasonably expect that, in view of the consenting attitude of public feeling, the purpose of legitimate combination will not be crossed by a method so violent and unjust, and so fruitful in ultimate failure.

DEATH OF DR. HABERSHON.

THE public, the profession, and the College of Physicians will deplore the loss of Dr. Habershon, whose death occurred at Brook-street on the 22nd inst. The illness to which he finally succumbed first made its appearance some twelve months ago in the form of repeated attacks of indigestion. In November last he was prostrated by a serious attack of hæmatemesis. In spite of this, he recovered sufficiently to resume work. In April, however, the close attendance upon and death of Mrs. Habershon led to a renewed period of ill health, which culminated in a return of gastric disturbance. Frequently recurring hæmorrhage, dislike of and inability to retain food, quickly reduced his strength, notwithstanding all that the kind care of his medical friends could devise. His death occurred from exhaustion, and within a few days of his sixty-fourth birthday. Thus has passed from us one whom we could ill afford to lose—one who had made his mark amongst his contemporaries, not only as a well-known writer and a shrewd and careful observer, but as a man whose high principle, rectitude of conduct, and sterling friendship gained him alike honour and respect throughout a long and brilliant career. We hope in an early issue to give further particulars of his life.

BILLROTH ON THE DANGERS OF CARBOLIC ACID.

THE following letter of Dr. Th. Billroth of Vienna has been published: "I have lately seen four cases, in which fingers which had suffered a most insignificant injury became gangrenous through the uncalled-for application of carbolic acid. Carbolic acid is now much less used in surgery than formerly; we have only gradually become acquainted with its dangers. The acid may not only cause inflammation and gangrene, but also blood poisoning, and so may even prove fatal. It is useful only in the hands of a skilful surgeon, and ought never to be used without his advice. The best lotion for recent injuries is the ordinary lead lotion, which can be bought at any chemist's. The best antidote in carbolic acid poisoning is soap, which should be taken immediately and repeatedly until all symptoms of poisoning have disappeared."

THE DERBY GUARDIANS AND THEIR MEDICAL OFFICER.

IT would be gratifying to be able to assure ourselves that the relations between boards of guardians and the gentlemen whom they have chosen to take charge of the medical interests of the parish poor were generally of so happy a kind as those which appear to subsist between the Derby board and their medical officer. At a recent meeting of this board, Mr. Gentles took occasion to refer to the lengthened period (twenty-one years) for which he had, with uninterrupted satisfaction to himself, served them in the capacity of medical officer. During that time, he said, he had paid no less than 110,000 visits. The Rev. W. H. Tetlow, with the hearty concurrence of his fellow-guardians, congratulated Mr. Gentles on the attainment of his majority in the service of the board, and expressed his confident hope that the cordial understanding which had heretofore reigned between themselves and their medical officer would be maintained in the future.

LEPROSY AT THE CAPE.

THE September number of *Blackwood's Magazine* opens with a short descriptive article upon Robben Island, near Cape Town, which is inhabited by a population that consists "approximately, of 130 lepers, 230 lunatics, 30 convicts, and 160 police and ward-masters." There are two resident medical men, the senior of whom is governor. The writer gives a somewhat too realistic description of the leper wards and their inmates, and, be it noticed, cites the opinion of the doctor who accompanied him in his visit—that he has "no shadow of doubt" as to leprosy being contagious. On the testimony of this writer, the "hospital" consists of nothing but crazy sheds, destitute of commonest furniture and fittings, and over-crowded with the sick from this dreadful disease. The article is headed "Wanted, a Father Damien"; but even a man of that devoted type would have hard work to secure the comfort and decency which the authorities of this colony of Great Britain seem according to the writer of the article to refuse to these poor outcasts. We are willing to believe that this may be only one of the many examples so common in our midst of the evil that is wrought by "want of thought," for it would be impossible that the sufferings of the leper should fail to awaken sympathy even in the official breast. Allowing, too, for the unconscious exaggeration of a visitor brought face to face with a leper colony, the article contains statements which should lead to immediate steps being taken to investigate the alleged deplorable conditions existing in the place.

GRAVES'S DISEASE.

A CASE of Graves's disease in the Academical Hospital at Upsala, under the care of Dr. I. Aug. Hammer, tends to confirm Benedikt's view that the cervical branch of the sympathetic is not affected in this disease. *A priori* it seemed probable enough, as exophthalmos had developed more rapidly on the left side, and at the same time sensibility over the superior cervical ganglion of the left side existed, together with long-standing headache affecting the left side, and partaking of the character of paralytic hemicrania. The result of microscopic examination was, however, quite negative. In twenty-two post-mortem examinations in GRAVES'S disease published from 1860 to 1887, the sympathetic nerve was found quite normal in fifteen; in the other cases, either unilateral atrophy of the nerve elements—especially of the ganglion cells—was found, or the connective tissue was hypertrophied, or these two conditions coexisted.

SEA-BATHING FOR CHILDREN.

IT would be needless and vexatious alike to children and parents who yearly enjoy a holiday at the coast if we were to picture in graphic detail all the possibilities of injury which there, as elsewhere, abound. Sunstroke, the risk of catching cold, of falling into the sea from piers, rowing boats, or sailing boats, and many more accidents both within and out of doors, need not now receive from us a more than passing mention. Sea-bathing is in itself a fertile theme. There is in this connexion one point in particular to which we would direct attention. A contemporary writes at some length in condemnation of the common custom of ducking and forcibly bathing young children in the sea. He objects to this, not unreasonably, on the ground that the beneficial effect of bathing depends chiefly on its influence as

a cardiac tonic. This advantage, he observes, is largely discounted by nervous depression when a child, already scared at the sight of what seems a wild waste of water, is further terrified by rough-and-ready immersion. There is truth in his argument that there need be no difficulty in bathing even such children if their education in the art be carried out by more persuasive methods. In cases of this kind any known constitutional timidity should have ample consideration. At the same time it is most necessary to distinguish between this and mere passionate disinclination. In the latter case a disappointment of the will is itself a useful lesson in obedience. More than this, there are even children of naturally diffident character, but otherwise healthy, for whom a prescribed sea-bath under moderately rigorous management provides an ultimately useful tonic. In all such cases much will depend upon the judgment of the persons immediately responsible. It follows, from the above remarks, that any who may be thus placed should study closely the characters of their children, and guide their conduct accordingly.

EFFECTS OF ALCOHOL IN MODERATE QUANTITY.

DR. MOGILIANSKI (*St. Petersburg Dissertations*, 1888–9, No. 87) has investigated, in a painstaking manner, the effects of alcohol as a beverage on persons who are and who are not accustomed to it. He selected as his subjects nineteen healthy young men, mostly students, and estimated the constituents of their food and also their urine and fæces for several days with and without alcohol. He found that the temporary use of moderate quantities of alcohol in those accustomed to it improved the appetite and increased the assimilation of nitrogenous principles; but that in persons not habituated to its use the assimilation of nitrogen decreased. Alcohol appeared to diminish the assimilation of fat. The destruction of the albuminoids in the body always decreased with moderate doses of alcohol, and frequently even with small ones. No diuretic action was observed; indeed, the amount of urine passed by the subjects while they were taking alcohol was less than when they did not take it. The quantity of alcohol given per diem—usually in the form of vodka—varied from 60 to 140 cubic centimetres.

BURIAL REFORM.

THE Rev. F. Lawrence, the indefatigable Secretary of the Church of England Burial Reform Association, informs us that it is their intention to ask for an interview with Lord Salisbury. The object of this is to urge upon the Prime Minister the importance of taking steps for the protection of the public against the dangers involved in the continued general use of such cemeteries as Brompton, Tower Hamlets, and others. The returns recently furnished of the numbers interred in these and other metropolitan cemeteries, which were obtained at the instance of the Association and published in THE LANCET of Aug. 17th, show that the dead lie in and around London to an extent which it is almost appalling to contemplate. Were they all properly buried it would be serious enough; but when it is remembered that a vast proportion are not really buried at all, but boxed up in lead coffins and deposited in vaults—in other words, entombed in such manner as to cause, sooner or later, noxious emanations of poisonous gases,—it becomes manifest that the subject is one for legislation. The Association has already done an excellent work in drawing attention to the evil, which is intensified in the cemeteries and other burial grounds near large centres of population. But, though intensified there, the evil is not limited to urban districts; over-crowded cemeteries, church- and chapel-yards, may be found in localities where they would be least expected. The Home Secretary has ordered the churchyard of Wetheral, a most picturesque village near Carlisle, to be closed at the end of this year; and it is an indisputable fact that in this same churchyard, so far back as thirty-five years ago, human remains were disturbed and turned up in reopening old graves and in digging fresh ones. It ought to be generally known that any disturbance of a human body once buried, except by an exhumation order from the Home Office, is contrary to law, and the appearance of bones in digging a grave is *primâ-facie* evidence that the burial ground is already full enough, and should be closed. We hope, therefore, that the Burial Reform Association will enlarge the sphere of its inquiries.

FAT IN THE FÆCES OF DYSPEPTIC CHILDREN.

DR. W. T. TSCHERNOW of Moscow publishes in the St. Petersburg *Medicinische Wochenschrift* his analysis of the fæces of dyspeptic infants, which he found to differ both physically and chemically from the fæces of healthy infants. Dyspeptic fæces contain 85 per cent. water and 15 per cent. solids, and nitrogenous, fatty, and inorganic salts. The solids of normal fæces consist of from 25 to 30 per cent. fat, 30 to 32 per cent. albuminous matter, 10 per cent. salts, and 28 per cent. carbo-hydrates; while the solids of dyspeptic fæces contain 45 to 60 per cent. fat, and 14 to 25 per cent. albuminous matter. The carbo-hydrates do not differ very much. In dyspeptic fæces fat increases at the expense of albuminous matters. This proportion was observed alike in children at the breast and in those fed on artificial food. All dyspeptic fæces contain, as above mentioned, more fat than normal fæces, and the quantity of fat does not depend on the degree of indigestion. Dr. Tschernow concludes from these results that Demme's and Biedert's so-called "fatty diarrhœa" was simple dyspepsia.

THE WEST-END FEVER OUTBREAK.

DR. CORFIELD has made a further report on this outbreak, in which he states that he has learned that a few more households have been attacked with enteric fever, but that no prevalence of the disease now exists. He adverts to the inspection being made by Dr. Barry of the Local Government Board, but apart from referring to the infection, which simultaneously affected a number of houses, as one brought from outside, he gives no clue to his opinion as to the vehicle through which the infection was communicated. It is significant that the vestry decided to discuss the report *in camerâ*.

SEWERAGE SCHEME FOR YORK.

WE are glad to learn that the Corporation of York have applied for a loan for £101,000 for the purposes of constructing an efficient system of sewerage for the city. York has long stood in need of this both as regards the defective nature of the existing sewers, their failure to reduce the subsoil water to a proper level, and the faulty method of sewage disposal. The scheme has been announced at the public inquiry which has been held to involve a process of chemical treatment at the outfall, with a view to passing a sufficiently purified effluent direct into the river.

CONGRESS OF DERMATOLOGY AND SYPHILOGRAPHY.

AMONGST the numerous Medical Congresses which have recently been held in Paris, that on Dermatology was one of the most successful. At its last session on Aug. 10th it was resolved that the Congress should be a triennial one, the motion being supported by Dr. Unna of Hamburg, Dr. E. Schwimmer of Buda-Pesth, and Mr. Malcolm Morris

of London. A vote was also taken as to the place where this International Congress of Dermatologists should meet in 1892, when the choice fell on Vienna, for which fifty-two votes were given; London received thirty-seven votes, and Hamburg one. Another result of the meeting has been the formation of a French Dermatological Society, with M. Ricord as its President.

FOREIGN UNIVERSITY INTELLIGENCE.

Christiania.—Dr. Torup of Copenhagen has been offered and has accepted the chair of Physiology.

Halle.—Dr. Erich Harnack has been promoted to the post of Professor of Pharmacology.

Kharkoff.—Dr. Kulshiski has been appointed Extraordinary Professor of Embryology and Histology.

Kiel.—Professor Weber of Breslau has been offered the Professorship of Physics.

Montpellier.—M. Granel has been recommended by the Professorial Council for the vacant chair of Botany, and M. Imbert for that of Medical Physics.

Zurich.—Professor Lang of Jena has been offered the Professorship of Zoology.

DEATHS OF EMINENT FOREIGN MEDICAL MEN.

THE deaths of the following eminent foreign medical men are announced:—Dr. Arthur Böttcher, Professor of Pathological Anatomy in Dorpat, and formerly co-editor of the *St. Petersburger Medicinische Wochenschrift*, at the age of fifty-seven. Professor Böttcher had published many researches on the Pathology of the Liver, Kidney, and Gall-bladder, and had obtained the Baer prize of the St. Petersburg Academy of Sciences for an elaborate research on the Structure of the Labyrinth of the Ear.—Dr. P. Koch, Chief Medical Officer of the Congo Free State.

THE Government of New South Wales has appointed a committee, consisting of Sir Charles Nicholson, Bart., M.D., D.C.L., Sir James Crichton-Browne, M.D., LL.D., F.R.S., the Hon. H. N. MacLaurin, M.D., LL.D., and Sir Saul Samuel, to select designs for four large stained glass windows, which are to be placed in the Medical Hall of the University at Sydney. The windows are to contain sixteen full-length figures, and it is desired that these should represent the Fathers of Medicine and the most eminent members of the medical profession down to the present time, so that the youths of the colony entering on the study of medicine may be perpetually reminded that their science and art have had an illustrious history.

VENICE, to the great satisfaction of her population, resident and migratory, is to undergo a complete sanitary rehabilitation. The works to be commenced with this object will spread over ten years, and the first provisional estimate of the outlay amounts to some four millions and a half francs. In conjunction with this purely hygienic undertaking, a plan for remodelling the city architecturally will also be carried out, for which a period of thirty years is computed to be necessary.

CONGRESSES, for medical and surgical objects particularly, seem to multiply in Italy. On Sept. 1st will meet at Ancona the "Congresso Medico Marchigiano" (Medical Congress of the Marches), and the programme, an extensive and varied one, will occupy the remainder of the week. Other professional Congresses, also purely provincial in their objects and membership, are announced for the autumn months.

CATCHING AND "CRIMPING" FISH.

By J. LAWRENCE-HAMILTON, M.R.C.S.

No. II.

As compared with other vertebrates, it is stated that the relative proportion of myosin or muscle clot, one of the chief albuminoid bodies or proteids in muscle, is greater in fish than in land animals. The coagulation of the myosin causes the contraction of the muscular fibres in fish to be long retained even after death, and is supposed to give the flesh of fish transversely gashed or *crimped* a firmer and crisper taste, whilst some observers declare that the specific gravity of the muscular fibres is increased. During the post-mortem coagulation of the myosin acids are liberated and heat is evolved. Crimping is usually performed prior to death, and always previous to the subsequent cadaveric rigidity or rigor mortis. The most successful crimping is attained on capture by at once bleeding the fish whilst still alive, which bleeding immediately produces faintness, passing rapidly into insensibility. It is obvious that it is useless to resort to bleeding when blood-clotting has commenced. Except the red-fleshed, ham-like tunny, fish have generally comparatively little blood to lose. The pink colour of the salmon family is due to feeding largely on minute shell-fish, which its digestion turns red, as if boiled. The alimentary juices of the rock pouter, a kind of whiting, also convert the shells of crabs into a pink colour. In crimping, the sharp powerful blows on the head of the fish prevent the fish exhausting its muscles by convulsive efforts. When the flesh-gashing is finished, the animal is immersed in cold clean spring water. The larger and thicker the mass of flesh to be crimped, the longer the reaction of muscular contraction is delayed. Prior to crimping, after the bleeding, the fish should be gutted, and cleaned inside and out with abundant washing in fresh flowing cold water. British fishermen have an unfounded prejudice that bleeding injures crimping. Medical jurists have noticed that cadaveric rigidity occurs relatively early after severe hæmorrhage, and that from a corpse an amputated limb previously drained of all its available blood still shows post-mortem rigidity. Some physiologists consider crimping and rigor mortis to be both chiefly due to the contraction of muscular fibres caused by the coagulation of the contained myosin. Crimping fish by exposing an extended superficial surface, and that mostly deprived of its skin, to moisture, air, temperature, and bacteria, thus rapidly increases the tendency to putrefaction. Hence both the fish trades and the public would benefit by the abolition of this frivolous food-wasting fashion.

Ruining the fisheries, robbing the fishermen alike of their netted and hooked fish, the ever-hated dog-fish, on capture, without previous bleeding or gutting or being stunned, is sometimes crimped alive in writhing agony till death relieves the tortured but torturing animal of its sufferings. Where, however, there is no market for the dog-fish, then, on capture, often, its saleable liver is cut out and kept, and the mutilated fish thrown back into the sea, to die a lingering death. The dog-fish, perhaps, like its bigger brother the shark, may possibly also be kept ever hungry, ever feeding, and ever ferocious by the insatiable appetites of herds of various species of internal parasites, especially tapeworms, which cruelly torture and torment the digestions of their unwilling hosts. It is said that shoals of dog-fish will even attack and eat piecemeal the living whale.

As every schoolboy knows, live-bait fishing consists of inserting a collection of hooks through a small living fish, and then sinking it in the water. However much this sport may fascinate a professional angler, it is cruel martyrdom to the tortured little fish.

Some Kent fishermen having caught a big sturgeon, attached a rope to its tail, and thus towed their living prisoner up the Thames to sell it to an aquarium. The rope had cut its way down to the animal's backbone, who nevertheless speedily recovered in the aquarium, thus indicating, anyhow, that some kinds of fish recover from serious wounds with remarkable quickness, and even from wounds which would probably be fatal to most land animals.

In welled boats, halibuts are hung up by their tails, under the delusion that in these artificial conditions the fish will enjoy longer lives, and that their flesh will keep longer

fresh for the market. These local injuries must not be mistaken for those caused by the alleged habit of halibuts at the bottom of the sea, arranged in parallel rows, waiting and watching for small fish and shell-fish. When failing such food-supplies, the hungry halibut attacks and eats the tail of its nearest neighbour, which explains the frequently injured and absent tail of freshly-caught halibut. Hake hooked near the surface vomit on board, but if hooked at a greater depth it vomits before reaching the surface. Pursued by bigger fishes, the smaller fish will sometimes vomit the contents of their stomachs, partly through fear, partly to lighten their load, so as to be able by quicker swimming to escape, but perhaps, also, like the sea-gull chased by the skua, or dung-bird, so as to appease the not over-fastidious appetite of its pursuer, who thus gets partly digested or naturally cooked food. Many of the sea-cucumbers (Holothuriæ) on injury or irritation eject part or all of their internal organs. Some fish disgorge for the pleasure of again eating their vomited food. Crabs attacked by sea-birds shed their claws and legs in succession. It is stated that sometimes hooked fish get their skins inflated by accumulated air between the skin and subjacent muscles, and that such fish rise to the surface unable to sink. A fish hooked in deep water and quickly drawn up to the surface is like an animal hunted up-hill to death, or like a man rushed up in a balloon, and hence the suddenly diminished pressure, to which fright and pain are added, frequently brings up such fish dead at the surface of the water. Frank Buckland stated that he believed that a fish held by a hook in a very rapid stream would be drowned by the rushing water holding it like a vice on each side, and thus not allowing the gill covers to expand.

A fish is said to drown in the air like a man drowns in the water or is strangled in the air. In each case the air is prevented from getting to the breathing apparatus. In man, because, in drowning, the water intervenes, though perhaps also to spasm of the glottis acting as a sphincter. Experiments by Sir Benjamin Brodie and Dr. Goodwyn with coloured fluids and quicksilver showed that in animals drowned under observation the small amount of fluid entering the lungs was not sufficient to account for death. In man also death by drowning may arise from exhaustion, shock, apoplexy, disease of the heart, concussion, injuries, or from mixed causes. The gorging with water of even the minute vessels of the lungs in certain cases of drowning may be chiefly due to post-mortem changes. In fish, the numerous minute bloodvessels composing the gills or fish lungs, rapidly drying, stick together and get choked up. Hence the familiar violent open-mouthed gasping of fish when landed. In the air, the fish strives in vain to separate its gill filaments, which it cannot do without the intervention of water. (There are exceptional families of fish which can breathe in air for long periods together.) Anglers often drown fish in the water. The moment the fish is hooked, it rushes about in frantic fright, rapidly running through the successive stages of undue energy, exercise, exertion, and exhaustion. The faster and more furious the fish fights or struggles, the faster it breathes and overworks its heart, till it is fully pumped out of breath, when the knowing sportsman pulls the captive fish's head to the surface of the sea or stream, "between wind and water," and finally, raising the fish's mouth out of the water, the exhausted animal becomes more and more faint, feeble, and giddy. Its gills adhere together, and virtually cease acting. The blood becomes over-carbonised, and hence the fish drowns or suffocates whilst still in the water.

It is said that at 100 fathoms, or 600 yards, the pressure of the sea water exceeds 265 lb. to the square inch, and hence securely corked empty glass bottles sunk by means of weights below 100 fathoms become crushed. If filled with water, the cork is driven inwards, and in drawing up the bottle to the surface, the cork is often found returned in an inverted position to the neck of the bottle. As a practical rough-and-ready approximation, it is estimated that for every 1000 fathoms, or 18,000 feet, the pressure may be considered as about one ton to the square inch. To haul up one of the deep-sea lines used in the *Challenger* deep sea dredging, it took the fishermen from twenty to thirty minutes; and to avoid such hooked fish being blown to pieces, and leaving only a small shred of their individual anatomy attached to the hook, these abyssal fishes must be withdrawn very slowly and gradually. Raised from these colossal depths, the diminished pressure distends the gases inside the fish, especially should it be provided with an air bladder, and causes the fish to get to the surface (if not dead, almost powerless) in a rigid cataleptic spasm, usually with its stomach inverted and inserted into or through its mouth. Its eyes are started and stalked from their natural sockets, protruding outwards like horns. Frequently such fish, each weighing from 25 lb. to 50 lb., on approaching the surface, will be shot out of the water at some distance beyond the boat, because the animal is sent upwards by the expansion of its contained gases, quicker even than the experienced deep-sea fisherman can haul in his prize.

In trawling, owing to the pressure of the net and its contents, fish, especially herrings, are often hauled dead into the fisherman's boat. Strangled and drowned in the meshes of the net in water, herrings putrefy even too rapidly to be serviceable to the professional fish-curer, who frequently cures fish which in their so-called "fresh" condition would be unsaleable and uneatable. It is said that if an elastic band be placed round the gill-covers of a fish in an aquarium it makes violent efforts to escape this strangling. It moves rapidly in hurried fear and excitement in its tank, and will at times attempt to leap out of the water. It soon dies with the rapid invasion of cadaveric rigidity and early putrefaction. Now, the herring strangled in the mesh of the fish-net is also much pressed upon and banged about, handled more or less with dirty hands, all being extra conditions to aid, advance, and accelerate rapid decomposition. If, before capture, the herring should have over-distended its stomach and intestines with undigested food, then putrefaction sets up so rapidly that such herrings are even useless to the fish-curers, who technically term this condition "gut-pock." Some American and Swedish fishermen, after an abundant catch of herrings, whose insides are over-distended with recent undigested food, pen up the herrings alive in the nets sunk in the water, to give the animals time to digest their food, and thus avoid the loss of the herrings from the invasion of subsequent "gut-pock," which I trust later to treat of purely from biochemical and microscopic researches.

Some twenty-four hours after capture, notoriously unbled and ungutted herrings are peculiarly prone to post-mortem spontaneous pouring out or extravasation of blood, which darkened, damaged, and bruised appearance is quaintly recognised in fish-trade slang as "over-day tarts." Medical jurists have pointed out that in drowned persons putrefaction usually begins about the head, whilst the rest of the body may remain normal. Post-mortem spontaneous bleeding is probably due to the softening of the vessels from early and incipient putrefaction, to the influence of gravity, and to the irregular post-mortem stagnation of blood in the capillaries (apparently some of the colouring matters and extractives pass into and remain in the tissues also as a putrefactive change). The process of the coagulation of the blood intensifies the appearance of these post-mortem effusions or extravasations. Possibly the cadaveric rigidity affecting the heart and the coats of the arteries prior to the post-mortem rigidity of the voluntary muscles forces blood into the venous capillaries, where it unequally stagnates, simulating the appearance of recent bruises during life. (In some fish the heart be at forcibly long after all other signs of life are apparently extinct. A frog's heart separated may be kept pulsating in certain nutrient solutions. A freshly decapitated eel's head will bite. Dead mackerel are said even to "turn somersaults" owing to excessive sudden rigor mortis. The post-mortem quivering of some snakes explains the popular belief that snakes never die till sunset.) On death the skin loses all its previous elasticity. Medical jurists lay special stress upon the fact that this cadaveric lividity is chiefly seen in those dying suddenly in full health or by a violent death (as hanging, drowning, strangling, apoplexy, &c.), and is but very rarely seen in those who have died of hæmorrhage—another proof why fish should be bled on capture. If a stout muscular person has died suddenly, and the body is then wrapped up closely and tightly in a sheet and allowed thus to cool, then post-mortem bleeding may make a zebra-like series of stripes or bands, suggesting recent flogging during life, from which it is distinguishable by the fact of the skin being unbroken. Now, the above phenomena happen to herrings drowned in the meshes of nets, who suffer squeezing and squashing both from the contents of the nets and from the heavy weights of their thoughtless

captors. In the herring the chief post-mortem bleeding takes place first about its head, gills, gill-covers, and fins, and a little later internally along and around its backbone or spinal column. In the skate its mucous secretion continues for a time, apparently, after its death.

In fish, as in man, all contused or incised wounds and bruises during life, as well as post-mortem spontaneous bleedings, rapidly pass into early putrefaction. In fish these decompositions take place with much greater rapidity and energy, which natural putrefactive processes are terribly increased and accelerated by ignorant, wasteful, and unnecessary exposure to abundant air, moisture, heat, sun, rain, pressure, banging, bruising, wrenching, twisting, hammering, packing, and handling; to many varieties of solid, liquid, and bacterial filth, and to melted or melting ice. The consideration of these fish-spoiling combinations, wastefully sanctioned by chronic conventional custom, and the general indifference and apathy of the public and the medical profession to fresh fish preservation, I propose to treat of in my next contribution to THE LANCET, which has from the earliest traditions of its history always opened its columns for the discussion of all matters connected with a cheap, abundant, and healthy food-supply for the people.

THE IRISH PRISONS BOARD REPORT.

THE report made by the General Prisons Board of Ireland to the Lord-Lieutenant upon the operations under their supervision during the past year brings to light the welcome fact that in the sister island, as in Great Britain, the statistics of the past few years show a steady and marked reduction in the numbers of the convict population. In the short period of seven years past this reduction has amounted in the case of male convicts to 41 per cent., and in the case of females to 56 per cent. So pronounced an improvement has enabled the Board to recommend that the work of enlarging the convict prisons of Ireland should not at present be proceeded with, although a Royal Commission which sat only so lately as 1884 recommended a very considerable outlay of public money with that object. The Board, in discussing the question afresh, remark that a most material change of circumstances has ensued since that date, which was then probably not foreseen, and adduce the above figures in support of this view. The fact is certainly very remarkable, and, fitting in as it does with our own experience on this side of St. George's Channel, affords ground for a most encouraging hope that we are coming to a time of "sweeter manners, purer laws."

In another branch of their labours the Prisons Board have met, however, with less gratifying results. The number of commitments to prison for small offences shows, as compared with the preceding year, a very considerable increase, and this increase is largely made up, as we gather, of commitments for drunkenness. This one offence accounts, indeed, for nearly one-half of the total number of such imprisonments, and we have it on the authority of the Board that the criminal records show this great social evil to be extending.

One very important point in the theory of punishment is strikingly illustrated in the present report—that, namely, of the effect of short sentences upon habitual offenders. The remarks of the lady superintendent of the Grangegorman Prison upon this subject merit careful attention. She says: "I beg respectfully to inform you that the number of prisoners committed to this prison for the past year was excessively high, being over 8000, and to draw your attention to the fact that this number includes a great many old offenders, who were recommitted several times through the year, and generally for such short sentences as to deprive the imprisonment of the deterrent effect that longer ones might exercise. ..... I may refer to one (case), L. K——. This woman was committed to this prison thirty-four times last year, and never received a sentence for a longer term than fourteen days." A footnote adds that this particular offender had been committed 146 times in previous years, so that she has suffered 180 imprisonments in all. In such a case it is ridiculous to attempt to turn the offender into better courses by ordinary means. Our correctional appliances will continue to be absolutely helpless in a case like this until it is clearly recognised that persons of this class are not capable of regulating their own conduct. An asylum, not necessarily a lunatic asylum, but a place where they could be subjected to the exact amount of restraint necessary to keep them out of mischief, is the right place for such people. The confinement of the Bridewell is probably unnecessarily severe while it lasts, and it has the fatal defect of being intermittent. Not severity, but continuous care, is the remedy for such mental and moral disorder as this wretched creature exhibits.

MEDICAL OFFICERS OF THE ARMY AND NAVY.

THE report of the Committee of Inquiry into the pay, status, and conditions of service of medical officers of the Army and Navy has now been presented to both Houses of Parliament. Dealing first with the Army, the Committee consider the question of full pay, the rates of which were settled by the Royal Warrant of 1879, and the conclusion come to is that there is nothing to show that the pay is extravagant. The evidence received leaves it doubtful whether, if lower rates were offered, the same class of medical officers would be obtained. Careful inquiry has been made from those persons considered most likely to be able to suggest reductions, but without any success. As to retirement, it is pointed out that the large number of retired officers is owing to two causes: first, the compulsory age of retirement—namely, sixty for surgeons-general and deputy surgeons-general, and fifty-five for the executive ranks; and, secondly, to the right which every medical officer has to retire after twenty years' service. The Committee do not see their way to propose any alteration in the age for compulsory retirement in the case of the executive ranks; but, with reference to administrative officers, they see no reason why the surgeons-general should not continue to serve up to the age of sixty-two. No interference with the right to retire after twenty years' service is suggested, but the Committee are of opinion that, without altering the conditions of retirement or the rates of retired pay, more service might fairly be required from medical officers. It is believed that the financial saving must be chiefly effected by limiting as much as possible the establishment of officers, and it is recommended that at small home stations, where there is not more than two or three hours' ordinary daily work for the medical officer in charge, civil practitioners should, where practicable, be employed. Passing to the question of rank and title, the Committee point out that medical officers of the Army, especially the younger officers, are not contented with their present position, relative rank, which they contend was the only rank they ever held, having disappeared. The grievance of medical officers of the Army on this score appears to the Committee to have originated in great part from the abolition of the regimental system. On this question the conclusion of the Committee is as follows:—"We are of opinion that, in the Queen's Regulations and Army Pay Warrant, it should be stated that the officers of the Army Medical Department shall hold the following military ranks with relative army ranks, a table of which we append. We recommend that relative army rank, the abolition or omission of which has immediately caused the present discontent, should be restored in the following manner:—

Present Title—Medical Staff.	*Proposed Rank and Title—Royal Medical Staff.*	*Relative Army Rank.*
Surgeon-General ..	Surgeon-General ..	Major-General
Deputy Surg.-General	Surgeon-Colonel ..	Colonel
Brigade Surgeons, and Surgeons-Major now ranking as Lieutenant-Colonels	Surgeon Lieutenant-Colonel	Lieutenant-Colonel
Surgeon-Major	Surgeon-Major	Major
Surgeon	Surgeon-Captain. This rank to be given after three years' service as Surgeon-Lieutenant	Captain
Surgeon	Surgeon-Lieutenant	Lieutenant

The recommendation made with regard to service is that a plan should be devised whereby medical officers of the Army should not be changed from one duty to another as fre-

quently as at present, and the Committee are of opinion that it would be an advantage to all concerned if, without reverting to the regimental system, a medical officer were on first appointment attached for a definite term to a regiment or other administrative unit. When medical officers are on leave in consequence of disease contracted in and by the service, the Committee consider that they ought to be entitled to the same privileges as combatant officers. With regard to foreign service, it is suggested that the term of continuous service abroad should not exceed five years, except in cases of emergency, while the employment of retired officers is strongly deprecated, excepting perhaps as a temporary measure; and with regard to service in India, the Committee pronounce it advisable that, so far as is practicable, the regulations which obtain as regards pay and allowances at home should extend to officers serving in India. On the question of admission into the service, the Committee believe that a certain number of desirable officers might be obtained by exercising the power already possessed by the Secretary of State of offering a certain number of vacancies to men who have filled the office of house-surgeon or physician at hospitals, without examination, and they also recommend that the commissions of medical officers entering the Army shall date from the time they enter the service and not, as at present, from the time they leave Netley. One other point is dealt with under this head—namely, the sufficiency of the diploma of the Society of Apothecaries, and the result arrived at is that there is no good reason for requiring candidates at the entry examination to produce a second diploma besides that of that Society, if obtained under the conditions of the Medical Act of 1886. The report on the subject of Army medical officers concludes with a strong condemnation of the short service proposal.

The Royal Navy forms the subject of the second part of the report. The Committee express their pleasure at finding the medical service of the Royal Navy in a satisfactory and contented condition. Relative rank which regulates the position of medical officers of the Navy is well understood, and the officers appear satisfied in all respects with their pay and position. With regard to service, it is recommended that inspectors of hospitals and fleets should not be compulsorily retired before the age of sixty-two, and that naval officers should have opportunities from time to time of improving themselves by professional and scientific study. As regards the period of voluntary retirement, now twenty years' service afloat, the Committee do not recommend any alteration; but as regards retirement on gratuity after eight and twelve years' service, they declare that there has at present been no opportunity of judging how the scheme will affect the retired list, and that therefore they are not in a position to recommend any alteration.

Some members of the Committee dissent from certain of the recommendations contained in the report.

THE PARIS UNIVERSAL EXHIBITION.

(FROM OUR SPECIAL CORRESPONDENT.)

The International Congress of Forensic Medicine.—Railway Brain.—Hanging.—Rape on Children.—The Confinement of the Insane.—Morphiomania.—Simulation of Disease.—Wet-nurses and Syphilis.

FOLLOWING immediately the Congress on Criminal Anthropology came the Congress on Forensic Medicine. Though the attendance was small, the debates were well conducted and to the point. In this respect the Congress on Forensic Medicine was very superior to the Congress on Hygiene. The former had but a hundred members or thereabouts, while the latter had close upon seven hundred; but the members of the one Congress were all well versed in the subject, while the large majority of the members of the Hygiene Congress really knew very little about hygiene; they were learners rather than teachers. The Congress on Forensic Medicine was composed of medical men who have been witnesses or experts in criminal and other legal proceedings, and with them sat several celebrated barristers, magistrates, and judges. Thus every delegate had actually practised forensic medicine or dealt with it in one way or other, while many members of the Hygiene Congress had never attempted to practically enforce any rule of hygiene.

The Congress of Forensic Medicine was opened on the 19th inst., in the afternoon. Dr. Brouardel, as Dean of the Faculty of Medicine, was in the chair, and the sittings were held in the grand amphitheatre. He was seconded by Dr. Vleminckx, delegate of the Belgian Society of Legal Medicine, together with its secretary, Dr. Moreau. The University and the Bar of Brussels were represented, and also the New York Society of Forensic Medicine. There were also delegates from Brazil, Denmark, Hawaii, Italy, Mexico, Monaco, Paraguay, Peru, Roumania, and Switzerland. Dr. Brouardel, after a few graceful words of welcome, called upon Drs. Vibert and Gilles de la Tourette to read their papers on the Relation between Forensic Medicine and Cerebral Traumatism. Dr. Vibert insisted that the symptoms were not at once apparent. After a railway accident a man may very calmly walk to the next station, take a cab, do all that is necessary under the circumstances, and yet be perfectly unconscious. The injury to the brain where there is no outward sign, but which results from a violent shock, gives rise to considerable legal difficulties when railway companies and others are sued for damages. This is all the more complicated, as the symptoms do not always manifest themselves till a considerable time after the accident, and there is, further, a danger of the patient shamming what he does not feel, in the hope of getting heavy compensation. Again, it sometimes happens that a very severe injury is followed by slight consequences; while on other occasions a trifling traumatism is followed by general paralysis and insanity. Does hereditary predisposition account for this difference? In many instances no such evidence has been forthcoming, and, supposing it to be produced, ought it to lessen the claim for damages? The symptoms—sadness, loss of memory, &c.—are often attributed to a hysterical disposition; but how is it, for instance, that an old soldier, who had been through the hardships of a campaign and had never shown any such hysterical tendency, nevertheless displays the same symptoms after a railway accident? This is evidently due to a mechanical accident, and not to a predisposition. It is objected that women rarely suffer from "railway brain"; but women are not so often exposed to railway accidents. Dr. Gilles de la Tourette thought that traumatic patients invariably sought to hide their antecedents. Prof. Charcot had, on the contrary, often found hysterical antecedents with patients suffering from "railway brain." The expert called in by a railway company sees the patient two or three times; Professor Charcot keeps his patients for months, sometimes for years. The majority of cases are male patients, because the accidents occur to engine-drivers, stokers, &c., and the absence of hysterical predisposition cannot therefore be used as an argument. Dr. Lacassagne defined traumatisms as due to the organic injury resulting from a shock, whether caused by a railway collision, a fall from a scaffold, or a carriage accident. He had noticed, especially among workmen, men of great activity and industry, that after such an accident they became completely idle, and that with this idleness was manifested an enormous increase of appetite. Some friend takes the patient in charge, and promises to secure him liberal compensation. The man thereupon no longer dares to move, for fear of losing his compensation, for he feels that he is always being watched. But when once the verdict is given, the matter legally settled, these patients contrive to recover in an extraordinary manner. Dr. Motot protested that there were slight as well as serious cases. Another delegate considered it was a very great hardship that military pensions were not allowed unless the claim was accompanied by a statement that there was no predisposition; therefore this predisposition is carefully concealed. Sometimes also compensation or pensions were refused on the ground that traumatic hysteria is reputed to be curable. Pensions were refused even when it was demonstrated that the patient enjoyed the most perfect health before the accident, if it could be shown that there was predisposition. Dr. Penard urged that experts should be very reserved and moderate. The judges were always impatient for an immediate conclusion; medical men must, nevertheless, insist on having plenty of time for their observations. Dr. Brouardel thought that the word "hysteria" should be excluded from the discussion. The worst was that different doctors see the patient in different periods of the disease and of the judicial inquiry. Alluding to the symptoms described by Dr. Lacassagne, he said the same had been noticed among prisoners. Their dulness and silence were often due to

change from active to idle life, combined with a change of diet. This caused troubles of nutrition, which produced a form of intoxication. The patient, practically, was poisoned, and got better again when he returned to more active life and to his normal diet. The predisposition to hysteria was an absurd excuse, enabling railway and other companies to escape from their just liabilities. Everyone was slightly predisposed to hysteria. Compensation was refused the other day because the sister of the victim had a little hysteria at a moment of great trouble, when divorced from her husband. Hysteria ought to be set aside. No one could say that there had never been hysteria in his family, and therefore everyone was liable to find his claims for compensation denied. M. Chaudet said that the companies very often negotiated with the individual and came to a private agreement, giving him or her a small sum. Then, in the course of time, the injury proved much more serious than had at first been anticipated. The case was consequently brought forward again, and an action entered, this time before the civil tribunals, where it takes a very long time to obtain a decision. It was urged that there ought to be some method in the legal proceedings by which a verdict could be altered if, in course of time, the injury proved altogether different in its effects from what had been anticipated.

The Congress then adjourned, and on Tuesday morning commenced a discussion on the question of Hanging. Dr. Gosse, of Geneva, described the experiments he had made on himself. On two occasions he had succeeded in so far hanging himself that he entirely lost consciousness. He found that the cord often did not squeeze the throat so as to stop the breathing. The rope formed a sort of triangle which pressed on the carotid but not on the larynx. In that case death was not painful, there was a buzzing sound in the head and unconsciousness at a very early stage. But if the rope pressed on the throat then the struggle for breath was very painful. On carefully examining criminals after hanging, it would be found that when convulsions occurred the lungs were empty. If the victim could fill his lungs with air before the rope tightened he would not suffer so much, if at all. When a person was found hanged and there were two marks showing that the rope had changed place, this might be considered as a suspicious sign. It, in all probability, meant that he had been hanged after having been strangled. This he had noticed in the case of a gendarme hanged on the Swiss frontier. There were two marks, so he made a more careful investigation, and then perceived that the rope was too short for the gendarme to have been able to hang himself. Ultimately what seemed a suicide was proved to be a murder.

Dr. Lacassagne was now called upon to read his interesting paper on the Detection of Rape on Little Girls. Assault on little girls constituted about a third of the total number of cases brought before the Assizes Court. In his opinion, a regulated method of proceeding should be prescribed for such investigations. This was not so necessary in great towns, but rather for small villages and rural centres where the local practitioners had but slight experience of such matters. They did once in ten years what to others was a matter of weekly occurrence. Medical and legal rules for the examination of the victims of such assaults should be drawn up. This would seem irksome to very able and experienced men, but the generality would benefit by the uniformity of the observations, and after the prescribed formula of questions had been filled up with the required answers, it would be always optional to add any further and special observations thought useful. The first thing was not to delay the examination of the victim. He did not fully understand all the exigencies of legal forms, but magistrates, on their side, were evidently not specially instructed in anatomy &c., otherwise they would not so often be the cause of delays. The second point on which he wished to insist was the necessity of the presence of a third person—the mother of the child, a relative, or, if no one else could be obtained, the policeman who had brought forward the case. Thirdly, it was indispensable to question the child—to let her tell her story. It was not necessary to believe the child's story, but it very often gave a clue to the truth. Children frequently had altogether false ideas as to what constituted an assault. Dr. Moreau of Charleroi suggested that very careful questions should be put as to the dirty habits of the child and her companions. It was surprising how vicious, how skilful and learned in vice, these little children proved to be. In his opinion, the presence of the mother or the magistrate during the examination would overawe the child; but the expert, if alone, by patience and kindness would very often obtain precious information. With regard to redness and other local signs, he thought that not only a second but very often a third examination was required. The man should be examined and his daily occupation ascertained, for it was proved that certain trades produce a greater proportion of crime of this description. In Belgium, for instance, a very large number of assaults on young girls were perpetrated by bootmakers. Also a great number of persons still believed they could cure gonorrhœa by coming in contact with a virgin, and this superstition often led to the detection of the criminal. Dr. Lacassagne closed the discussion by replying to several arguments adduced. There was a very great danger of extortion, and if the doctor did not have a witness with him he might certainly find himself accused. He had the right of self-defence, and the only effective defence was to have a witness in the room. Many of the children were thoroughly corrupt and vicious, and were seeking to obtain money by exaggerated or false accusations, and it would be more profitable to accuse the doctor than some workman or labourer living in their neighbourhood. Therefore, even if it rendered the inquiry more difficult, still he insisted on the presence of a witness.

At the afternoon sitting, Dr. Motet, secretary-general of the Congress, read a paper on the Removal and Confinement of the Insane. He dwelt at length on the difficulty due to the various degrees of imbecility. One, having lived the ordinary life of a healthy child, is seized at the age of puberty with desires which he seeks to satisfy in a brutal manner: there can be no doubt as to this case. Another in appearance is less brutal; he is less impulsive, but equally the victim of hereditary transmission: he will be treated differently, though his complaint is the same, his irresponsibility equal. Then, again, a person who is in a state of acute mania, who is violent, is often more easily cured than the quiet patient, who answers, on the whole, very reasonably to the questions put to him. The magistrate, in the face of such difficulties, is sorely puzzled. He calls experts to assist him. Dr. Motet insisted on the necessity of an independent medico-legal examination before any verdict was pronounced that in any way interfered with the freedom of the subject. This opinion was endorsed by the Congress.

Drs. Lutaud and Descoust presented a report on the Legal Questions arising from the Abuse of Morphia. Most practitioners had had opportunities of noting that the taking of morphia had become much more general during the last ten years. At first administered under the personal surveillance of the doctor, the patient too frequently learnt how to inject the drug without assistance. This was admissible for incurable and extremely painful diseases, such as cancer; but it was too often done on the smallest pretext. The question arose as to how morphiomaniacs procured the morphine. Of recent years there had been some severe sentences pronounced against dispensing chemists for illegally selling the drug in Paris and other parts of France. A very respectable chemist related to the reporter that he now sold in the course of the year only about eight pounds' worth of morphia, while formerly his sale amounted to about £40, yet his business in other respects had in no wise decreased. Dr. Brouardel had recently found in the house of a very fashionable lady a bottle containing no less than 200 grammes of morphine, and it was now ascertained that a great number of morphiomaniacs had found means of procuring the drug from wholesale druggists and commission agents. This was to them a triple advantage; they escaped the surveillance of the doctor, they could obtain unlimited quantities, and it cost them much less. The only legal restriction imposed on wholesale druggists was that of inscribing in their books the address of the person with whom the sale was effected. Other morphiomaniacs drew up prescriptions and signed them with the name of a doctor. This was, of course, illegal and could be punished, but would be avoided if doctors would draw up their prescriptions on paper with a printed heading, and sign their names more legibly. It was also urged that in his prescription the doctor should distinctly state how often the prescription was to be renewed. Dr. Motet urged that cocaine was even more dangerous. Dr. Brouardel confirmed this opinion. Cocaine was three times more rapid in its effect, and had the peculiarity of making the people who took it jump out of the window—a double danger, for it not only killed the victim of the drug, but might possibly kill some innocent

pedestrian passing under the window at the time. Dr. Brouardel informed the Congress that a new projèct of law affecting dispensing chemists was now in course of preparation. It was proposed to draw up a list of drugs that could not be renewed without a fresh prescription from the doctor. There would be also a permanent revision committee, with power to alter this list. In the northern provinces of France it was becoming quite the fashion to give evening parties where the principal diversion was the administration of subcutaneous injections of morphia to the guests. Several speakers raised objections to a law preventing the renewal of an old prescription; this would be especially awkward for persons who were travelling. Finally, the Congress adopted the following resolutions: "Druggists and manufacturers of chemical or pharmaceutical products must not sell morphine or cocaine to others than dispensing chemists, and must only deliver these poisonous substances at the chemists' houses. A dispensing chemist must only make up a prescription once if it contain either of these two substances."

At the sitting held on Wednesday morning, Dr. C. Moreau of Charleroi, secretary-general of the Belgian Society of Legal Medicine, read a paper on the Simulation of Disease. One of the difficulties arose from the fact that the books on this subject instructed not only the doctors, but also the individuals who practised methods of deception. He thought the Congress should constitute an international committee to collect information as to the methods of detection that had been employed with advantage in different parts of the world. Dr. Vibert argued that, because a person shams with respect to one symptom, this did not prove that all the symptoms were fictitious. It was necessary to inquire what were the antecedents of the patient, and to see if there were not hysterical accidents. In the course of a desultory conversation, it was objected that a person who was really of unsound mind, or who was perfectly sincere in denying the authorship of some crime, might, in his desire to effect an escape, resort to some form of simulation, and might sham even in a ridiculous manner. A Belgian delegate gave the history of a case which, in Belgium, had caused a great sensation. A man was deserted by his wife, and he ultimately found that she was serving as a cook in a house of ill-fame. The husband approached her through a backyard and handed her a letter ordering her to come home, but she refused to do so. He thereupon drew his revolver and fired twice at her. The woman fled for her life. Another woman entered the kitchen to see what was the matter. The husband, though he had never seen this woman in his life before, and had nothing whatsoever against her, levelled his pistol, followed her movements, fired twice, and wounded her badly. Then the unfortunate man, acting as if in a dream, turned the barrel against himself, and again fired twice. This man, when arrested, frankly and without hesitation stated that he had shot at his wife, that he did so with deliberation, and had armed himself expressly for the purpose of shooting her if she refused to leave the house of ill-fame. But he utterly denied having shot at any other woman or having shot at himself. After discharging his weapon at his wife his mind became a blank, and he evidently had no sort of recollection of what happened subsequently. Dr. Vibert, on the strength of this story, inquired whether, in a great crisis and under the stress of great mental agony, anæsthesia does not often occur—a sort of mental trance which allows the automatic accomplishment of daily occupations without the patient having any knowledge or any consciousness of what he is doing. Dr. Duponchel complained that there were many errors in books treating the question of simulation. He related the case of a woman, who complained of such fearful pains in her left breast that it was amputated; but nothing was found. Shortly afterwards there were equal pains in the right breast, and this was amputated and also found to be perfectly healthy. It was only when the woman asked to have her wrist cut off that the possibility of her shamming occurred to the medical attendants. With regard to men, Charcot had largely contributed to show that what used to be attributed to simulation was in reality due to hysteria. Old authors, by their written works, proved how often they were mistaken. He related the case of a soldier who was repeatedly punished because, when at drill, he had cramps in the legs just at the moment he was ordered to march. This afterwards proved to be a genuine form of illness. Before attempting to detect simulation it was better to seek to discover real disease. People only imitated well what they had actually felt. The real means for detecting sham illness was to perfect the methods for discovering real illness. Was it possible now to sham heart disease or lung disease? When nervous diseases were better known they would be more easily detected. Some years ago a recruit feigned an attack of rabies, and the whole of the revising council drew their swords in self-protection. Nowadays this would be impossible. The first measure was isolation; a person who was shamming would hold out before witnesses, but he soon became wearied of the *rôle* when alone. Then the person should be examined very often and thoroughly fatigued. Dr. Duponchel did not advocate using cunning stratagems to make the patient contradict himself. The doctor had but a few moments to give to the case; the patient had all the twenty-four hours to think over it, and would very often turn the tables against the doctor. This was humiliating, and, if it happened in a dormitory before other patients, might have a very disastrous effect on the discipline of the establishment. It was necessary to be very sceptical, and not to believe even when a man confessed that he was shamming. This occurred in a Paris hospital recently. A man had a fit every Tuesday evening at 6.30 P.M. punctually, and never on any other occasion. Of course, he was suspected of simulation. One day, wearied possibly with his hospital life, he declared the whole thing was a sham. The director had the patient brought to his office and invited him, as he was only shamming, to simulate once again, and immediately, the attack. This the patient attempted to do, and so completely failed that the witnesses present were convinced his attacks were not simulation, though in the earlier stages they might have been an exaggeration of his malady. He was glad to note that simulation to escape military service was very much on the decrease in France. It existed only in the provinces. Every Parisian was thoroughly imbued with the sentiment that he owed his services to the mother country, and the attempt to avoid the military conscription by simulating disease, which was so frequent under the Empire, was unknown under the Republic. The Congress loudly cheered this assertion—an assertion, by the way, which was confirmed by several other speakers. Dr. Duponchel urged, on the contrary, that it would be very bad policy to doubt the word of a soldier who complained of illness; that it would be a source of great weakness, in action, to send ailing to the front. Dr. Lacassagne suggested that one of the most effective methods of detection was to ask the patient to write something—his memoirs, his impressions, or a letter. This often disclosed more than mere conversation. As the doctor could not be with the patient all day, there was a great advantage in securing the assistance, as observers, of his guardians, or even his fellow-patients. One individual who was pretending to be insane, the better to prove his insanity, struck the speaker a very heavy blow. What was to be done in such cases? Where insanity existed or was feigned, the case could best be treated and watched in an asylum. The doctor must be very slow in his inquiry. He must not allow the patient to do everything he desires; a little restraint, a little discomfort, must be imposed; perhaps then the simulation would be abandoned. Dr. Motet proposed that in prisons there should be a special ward or section for the cure and observation of those who were supposed to be simulating disease, especially madness. A Belgian delegate thought that criminals who feigned to be mad should be taken to a madhouse, and then told they had been acquitted. After this, if the culprit were shamming, he would very soon show symptoms of recovery. Several members of the Congress rose and spoke against the practice of such deception, and thought that the mere transmission to an asylum without resorting to falsehood would often produce the desired effect. The discussion terminated by a general understanding that it would be well, when practical, to have prison asylums.

At the afternoon sitting, Dr. Morel-Lavallée presented a very important report on Syphilis among Wet-nurses. As the employment of wet-nurses is, fortunately, not so general in England as in France, the question is of more interest on the French side of the Channel; nevertheless, it is a very grave matter, and merits all the more careful attention as it is fraught with many complications. Medical men might and should in a large measure prevent the spread of syphilis by nurses. According to French law (Article 1382 of the Civil Code), a doctor may be sued for damages caused by his imprudence, and, according to the verdict of the Dijon Court on May 14th, 1868, because of his

reticence. On the other hand, by the Article 378 of the Penal Code, the doctor is bound to respect professional secrecy. But, if the law is thus contradictory, his moral obligation is clear enough. The doctor's duty is evidently to prevent the spread of a contagious disease which is one of the most terrible scourges of humanity. The question presents itself under many different points of view. For instance, if the nurse is still healthy but the infant is discovered to be syphilitic, it is the duty of the doctor to prevent the nurse suckling the child, however great may be the inconvenience and loud the protest of the parents. Even if the nurse consents at her own risk to continue nursing the child, it would be necessary to draw up a legal document to that effect, countersigned by the nurse's husband, and no lawyer would consent to draw up such an act. Consequently, if the nurse falls ill, she will always be able to sue the parents of the child, and the doctor's responsibility and reputation will be involved. The doctor must therefore at once order the removal of the child. But, in doing this, the doctor must not mention the word syphilis to the nurse, for this would be a breach of the professional secrecy he owes to the parents, and would expose them to scandal-mongering, and perhaps even attempts at extortion from the nurse or others. Then, again, there is this other difficulty—that the nurse should not be sent away, for she may be in the period of the incubation of syphilis. The nurse should therefore be retained for six weeks or so, and render what service she can as a dry-nurse. The parents, however, may refuse to allow the separation of the child and nurse, but may allow the nurse to seek employment elsewhere. Then the doctor, as a last resort, must withdraw from the case, sending final instructions by registered letter, and keeping a duplicate of the same, so as to cover his responsibility. Sometimes, the infant having inherited syphilis, the wet-nurse is already contaminated before the mischief is noticed. It is then best to persuade the parents to confess the case to the nurse, to give her as handsome a compensation as they can afford, and get her to continue suckling the child. Discussing this portion of the report first, Dr. Brouardel thought that the only way to protect the nurses was to intimidate the father of the family. The saving point is that the milk of syphilitic nurses does not injure syphilitic children. At the hospitals it was easy enough to find syphilitic mothers who would gladly go out as nurses. Therefore, in view of preventing a nurse receiving the charge of a child likely to have inherited syphilis, the Congress passed the following resolution: "It is better that the child should be suckled by its mother; the consent of the father will frequently be obtained if he is made clearly to understand that the mother has nothing to fear from the infant; for if the infant is syphilitic, the mother will, in all probability, have been already contaminated before the accouchement." Some discussion followed with regard to the question of professional secrecy where abandoned children are concerned, it being argued that the State should be as jealous of the reputation of the child as its own parents. It was ultimately decided that the doctor should confidently entrust to the Director of the Public Assistance information concerning syphilitic lying-in cases, so that arrangements should be made to keep syphilitic infants and mothers together. Another question was put: A wet-nurse comes to consult a doctor. He finds that she is apparently in good health, but she has an infant in her arms who is syphilitic. If she says she is only nursing the child, the doctor has no right to examine the child or pronounce an opinion on its condition of health without the sanction of the child's parents. If the nurse, knowing this and wishing to obtain the doctor's opinion, tells a falsehood by pretending that it is her own child, then the doctor will tell her to continue suckling the child, on the ground that no further harm can be done. In that case the nurse will be the victim of her own falsehood; but still it would be more satisfactory if the spread of the disease could be stopped. Several speakers argued that the doctor only owed professional secrecy towards the person who came to consult him; and, if a nurse brought a child, he was justified in saying that the disease was syphilis. Another supposition arises. A nurse has suckled a syphilitic child, or a child suspected of syphilis; the parents refuse to keep this nurse. Is she to return to her home and perhaps infect her own family, or is she to try to get a place as wet-nurse elsewhere and there infect the second child entrusted to her care? She is in the period of incubation. No one can suspect the danger except the doctor of the family she has left, and his hands are tied by the bonds of professional secrecy. Again, if a chancre appears on the breast of a nurse some days after she has been suckling an infant, what shall be done? First remove the child, and if in five or six weeks there are no symptoms the child will have escaped contagion, and can then be given over to a healthy nurse. Till that time it must be fed from the bottle or from a goat. If the child shows, however, symptoms of syphilis, then it can be fed like all syphilitic children, and can be given back to its first nurse. In view of this probability, it would be well to keep the nurse, and to draw her milk by artificial means. This very probably need not be done for more than a fortnight, for by that time the labial chancre is likely to appear on the child. If the nurse has already contaminated the child before any discovery is made, then it is best to let her continue suckling, as no further harm can be done, and many complications might arise should the nurse be sent away. The possibility of instituting a system of certificates was then lengthily argued. Should all wet-nurses be called upon to obtain a certificate from the family medical practitioner—stating that they had not nursed a child affected with a contagious disease—before leaving and seeking a new place? Or should the parents, who applied for a wet-nurse, sign an engagement pledging themselves to give the wet-nurse a certificate, when she left, to the effect that the child she had suckled was not affected by hereditary contagious disease? Syphilitic parents, in that case, would not be able to apply for a nurse. A case was related where nine nurses had, in succession, been contaminated by one infant. As the reporter eloquently remarked, it is impossible to decide which is most surprising—the total absence of moral sense on the part of these parents, or the condition of the law which renders it possible for such disastrous and cruel facts to occur. M. Duvernet, who, at the Prefecture of Police, is entrusted with the inspection of wet-nurses, now adjourns for two months the granting of authorisation to wet-nurses to apply for service, when he finds that they have been sent away from a house without any reason being assigned by the family or by the doctor. This proceeding, confessedly most unjust to the nurses, is only done because it is feared that they may have contracted syphilis. The nurse is made to suffer, is deprived of her chances of employment, because the infant she had been nursing may perhaps have inherited syphilis from its parents. Thus is the nurse punished through no fault whatever of her own, and yet M. Duvernet does not dare act otherwise for fear of spreading syphilis in healthy families. Notwithstanding the painful situation here depicted, the Congress could not come to any decision as to a system of certificates. Dr. Brouardel, for instance, related that among his patients he had a client who was the father of five very healthy children, but the sixth and seventh child were both syphilitic. He was a man who thought himself absolutely cured, who could have obtained and have given all the certificates required. The sixth question in the report was thus worded: "A husband formerly had syphilis; a family doctor has followed the case throughout; how many years after he has been cured would it be safe to permit this person to give his child to suckle to a healthy nurse?" It was generally agreed that this question could not be answered; though, as a rule, it was thought that if, after three years' treatment, two years passed without any accident, then there was not much danger. Finally, it was inquired what was the position of a medical man summoned for an accouchement and asked to select a nurse. He knows nothing of the antecedents of the family. He cannot examine them; he can hardly question them on so delicate a question. In such a case it would be more prudent to urge that the family doctor should be consulted, and that the family doctor should decide which wet-nurse, if any, ought to be employed. With regard to the origin of syphilis, whether it began with the nurse or the child, this can generally be established by the date of the appearance of the first symptoms. Dr. Lacassagne suggested that the infant might be dead and buried before the chancre appeared on the breast of the nurse. In that case exhumation, and the examination of the liver and the bones, would probably decide whether the nurse had a right to claim damages. After some more general remarks the discussion closed. Dr. Morel-Lavallée may be congratulated on having fairly puzzled the Congress by his series of questions, which certainly illustrated in a very graphic manner the great difficulties of the subject.

Paris, Aug. 27th

THE BRITISH DENTAL ASSOCIATION.

NOT the least interesting part of the meeting of the British Dental Association last week at Brighton was the demonstration day, and here, as in the papers read, a great deal of attention was devoted to anæsthetics, purely from a dental point of view. Dr. Frederick Hewitt anæsthetised several patients with a mixture of oxygen and nitrous oxide, one part of the former to seven of the latter, the gases being mixed at the time of operation in a gasometer supplied from compressed-gas bottles. The advantages Dr. Hewitt claims for the admixture of oxygen with nitrous oxide are: that it is even a safer anæsthetic than nitrous oxide alone, for the element of danger in the latter—asphyxia—is eliminated; that it gives the operator greater facility, owing to the flaccidity of the muscles and the absence of jactitations and stertor; and also, as a minor but still practical point, that lividity of the features—such an alarming feature to the patient's friends—is entirely absent. In watching the operations, the onlooker, used only to nitrous oxide, might be puzzled to know when anæsthesia was complete, as the stertorous breathing, his chief guide formerly, was not forthcoming. The average relative time of insensibility produced by the two methods—nitrous oxide, and nitrous oxide with 12·75 per cent. oxygen under pressure—has not yet been settled, as only from 200 to 300 cases have been observed; but in the particular cases which we saw, the time under the mixture was as long as, if not longer than, under gas alone. The objection that this method requires a gasometer and the apparatus, and is therefore not easily portable, should be overcome with no great difficulty. Time and an extended number of experiments will show whether this mixture will supersede gas alone, and the best proportions to use, as Dr. Hewitt himself says that some patients do not become insensible under its influence, and he has had then to go on with the nitrous oxide simply.

The production of an analgesic state by "rapid breathing" was also the subject of demonstration at the meeting by Dr. Bonwill of Philadelphia, who has for many years advocated and practised, and was the first we believe to suggest, this method. By getting a patient, he maintains, to breathe atmospheric air at the rate of 100 inspirations per minute, it is possible to render him insensible to pain for any operation not exceeding twenty or thirty seconds. The patient must be warned that he will know all that is going on, but will feel no pain, and must keep up the forced respiration during the whole time of the operation, and "the more energetically he breathes the more perfect the effect." His theory of its action is that there is (1) a diversion of will force; (2) an excess of carbolic acid set free from the tissues, due to the large amount of oxygen passed into the lungs; and (3) cerebral hyperæmia. Physiologically, objections can be made to both of the latter statements, and the effect, when produced, may be furthermore due to exhaustion. Unfortunately, the subjects upon whom Dr. Bonwill experimented would not act up to his instructions, and so no operation was performed, and one can readily understand that, where so much depends upon the voluntary action of the patients, a crowded room, by distracting their attention, may largely increase the difficulty. This shows that there is an insuperable objection to the method, as too much depends upon the patient. Dr. Bonwill was warmly received, and took part in other demonstrations.

THE ROYAL INFIRMARY, HULL.—The financial position of this institution has necessitated an appeal from the Committee for help for present needs and for additional future public support, amounting together to £6000. It appears that the Wilson Wing and the Bailey Out-patients' Departments (the erection of which was defrayed by the inhabitants of Hull and neighbourhood) have been in occupation for two or three years, and entailed an additional expenditure of £1000 per annum, whilst the yearly subscriptions have decreased by about £300 per annum. Moreover, failing the anticipated receipt of adequate funds for endowment, and to cover the increased cost of maintaining the inmates of the new buildings, a debt has accrued to the bankers amounting to £3665, and the Committee ask the public for funds to discharge this claim, and to provide further annual subscriptions to the extent of £2300.

Public Health and Poor Law.

LOCAL GOVERNMENT DEPARTMENT.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

Wolverhampton Urban District.—Dr. Henry Malet gives an interesting and detailed account of the measures taken by his department during 1888 to secure the isolation of cases of scarlatina, from which it would appear that, out of 194 cases heard of, 111 were removed to the borough hospital. But the existing arrangements for the isolation of infectious diseases have been found to be inadequate to the requirements of the borough; indeed it is stated that the authority would be utterly helpless if they were called upon to deal with two diseases simultaneously, besides which the accommodation in the administrative building is altogether inadequate for the staff. It is to be hoped that this matter will without delay be effectually dealt with. Another point of interest discussed in the report is the dangerous practice of trusting to so-called cleansing in the case of wells liable to pollution by soakage of filth. As Dr. Malet points out, the sewage that pollutes a well does not come from the inside but from the outside of the well, and therefore it is useless for an authority or an individual to be content with a process of cleaning out the interior of an excavation into which soakage from without has taken place, and into which the same soakage may again at any moment occur. It is the outside source of the contamination that must be detected, and the possibility of its recurrence should be altogether prevented before any satisfaction can be expressed. This is a point we have often adverted to, and it is one about which there is much ignorance, if we may judge by the action often adopted. The general death-rate for the borough last year was 19·5 per 1000 living.

Wandsworth District.—During 1888 the birth-rate for this district was 29·5, and the death-rate 13·4 per 1000; these statistics not taking account of Battersea, which, since the last annual report was issued, has been separated from Wandsworth. The infant death-rate under one year of age varied from 101 per 1000 registered births in the Streatham to 151 in the Putney sub-district. Measles was very prevalent, and it was also fatal, 53 deaths having taken place; and the medical officers of health jointly point out that, whereas in London during 1888 there were 1209 deaths from scarlatina, no fewer than 2401 deaths took place from measles, and they urge that much less attention than is called for is given to the prevention of this fatal infantile disease. Each of the four medical officers of health appends a separate report on that portion of the district for which he acts.

Bournemouth Urban District.—The general death-rate for Bournemouth during 1888 was 14·0 per 1000 living, and the amount of deaths from any of the infectious fevers was but small. The local infectious hospital is credited with doing much towards the prevention of such diseases, and Mr. Kinsey-Morgan speaks of it as being a model of its sort, as being supplied with a laundry and quarantine cottage, and as being resorted to by high and low, rich and poor. The so-called quarantine cottage seems to be an isolation ward for doubtful cases, such as is now attached to most well-conducted hospitals of this class. The use of salt water for the flushing of sewers, road watering, &c., has been put to the test, and it is stated in every way to answer its purpose. Salt-water baths can also be provided for every house.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN twenty-eight of the largest English towns 5402 births and 3151 deaths were registered during the week ending Aug. 24th. The annual rate of mortality in these towns, which had been 18·8 and 19·2 per 1000 in the preceding two weeks, declined to 17·2 last week. During the first eight weeks of the current quarter the death-rate in these towns averaged 19·6 per 1000, and was 0·6 below the mean rate in the corresponding periods of the ten years 1879-88. The lowest rates in these towns last week were 11·1 in Brighton, 12·4 in Bradford, 14·3 in Derby, and 14·6 in

Huddersfield. The rates in the other towns ranged upwards to 25·5 in Cardiff, 26·5 in Preston, 29·2 in Newcastle-upon-Tyne, and 34·0 in Plymouth. The deaths referred to the principal zymotic diseases in these towns, which had been 785 and 811 in the preceding two weeks, declined again last week to 636; they included 394 from diarrhœa, 60 from whooping-cough, 50 from scarlet fever, 49 from diphtheria, 41 from measles, 41 from "fever" (principally enteric), and 1 from small-pox. These zymotic diseases caused the lowest death-rates in Brighton, Halifax, and Oldham, and the highest in Preston, Sunderland, and Plymouth. The greatest mortality from diarrhœa occurred in Plymouth, Wolverhampton, Newcastle-upon-Tyne, Preston, and Sunderland; from measles in Bradford, Sunderland, Wolverhampton, and Preston; from scarlet fever in Derby and Plymouth; from whooping-cough in Portsmouth, Oldham, Bradford, and Sunderland; and from "fever" in Sunderland and Birkenhead. The deaths from diphtheria included 37 in London, 3 in Plymouth, and 2 in Bolton. Small-pox caused one death in Leeds, but not one in any other of the twenty-eight great towns; and no small-pox patient was under treatment at the end of the week either in the Metropolitan Asylum Hospitals or in the Highgate Small-pox Hospital. The number of scarlet-fever patients in the Metropolitan Asylum and the London Fever Hospitals at the end of the week was 871, against numbers increasing in the preceding eight weeks from 559 to 822; 98 cases were admitted to these hospitals during the week, against 124, 98, and 90 in the previous three weeks. The deaths referred to diseases of the respiratory organs in London, which had been 149 and 162 in the preceding two weeks, declined again to 115 last week, and were 67 below the corrected average. The causes of 57, or 1·8 per cent., of the deaths in the twenty-eight towns last week were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Wolverhampton, Bradford, Leeds, Sunderland, and in three other smaller towns; the largest proportions of uncertified deaths were registered in Liverpool, Sheffield, Huddersfield, and Halifax.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been 18·6 and 17·8 per 1000 in the preceding two weeks, rose again to 18·1 in the week ending August 24th; this rate exceeded by 0·9 the mean rate during the same week in the twenty-eight large English towns. The rates in the Scotch towns ranged from 14·0 and 14·6 in Greenock and Edinburgh, to 20·9 and 29·9 in Glasgow and Paisley. The 462 deaths in the eight towns showed an increase of 7 upon the number in the previous week, and included 48 which were referred to diarrhœa, 13 to measles, 11 to whooping-cough, 8 to diphtheria, 7 to "fever," 2 to scarlet fever, and not one to small-pox; in all, 89 deaths resulted from these principal zymotic diseases, against 107 and 87 in the preceding two weeks. These 89 deaths were equal to an annual rate of 3·6 per 1000, which slightly exceeded the mean rate last week from the same diseases in the twenty-eight English towns. The fatal cases of diarrhœa, which had been 57 and 43 in the preceding two weeks, rose again to 48 last week, of which 24 occurred in Glasgow, 7 in Edinburgh, and 7 in Dundee. The 13 deaths referred to measles exceeded by 3 the number in the previous week, and included 5 in Leith, 3 in Aberdeen, and 3 in Glasgow. The fatal cases of whooping-cough, which had been 24 and 21 in the previous two weeks, further declined to 11 last week, of which 5 occurred in Glasgow and 3 in Edinburgh. Of the 8 deaths from diphtheria 3 were recorded in Glasgow, 3 in Dundee, and 2 in Edinburgh. The 7 fatal cases of "fever" included 2 in Glasgow, 2 in Edinburgh, and 2 in Paisley. The deaths referred to acute diseases of the respiratory organs in the eight towns, which had been 60 and 57 in the preceding two weeks, further declined last week to 48, and were 27 below the number returned in the corresponding week of last year. The causes of 45, or nearly 10 per cent., of the deaths registered in the eight towns during the week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 24·8 and 24·4 per 1000 in the preceding two weeks, rose again to 25·1 in the week ending Aug. 24th. During the first eight weeks of the current quarter the death-rate in the city averaged 22·7 per 1000, the mean rate during the same period being 17·4 in London and 15·9 in Edinburgh. The 170 deaths in Dublin showed an increase of 5 upon the number in the preceding week; they included 20 which were referred to diarrhœa, 4 to "fever," 2 to whooping-cough, 1 to measles, 1 to scarlet fever, and not one either to small-pox or diphtheria. Thus the deaths from these principal zymotic diseases, which had risen from 15 to 34 in the preceding three weeks, were 33 last week; they were equal to an annual rate of 4·9 per 1000, the rate from the same diseases being 2·4 in London and 3·3 in Edinburgh. The deaths referred to diarrhœa, which had risen from 8 to 25 in the previous three weeks, were again 25 last week. The four fatal cases of "fever" showed a slight further increase upon those recorded in the preceding two weeks; while the two deaths from whooping-cough showed a decline of 2 from those in the previous week. The deaths of infants showed a decline from the high number in the preceding week, while those of elderly persons showed a slight increase. Eight inquest cases and 4 deaths from violence were registered; and 50, or nearly one-third, of the deaths occurred in public institutions. The causes of 22, or nearly 13 per cent., of the deaths in the city were not certified.

Correspondence.

"Audi alteram partem."

THE MAYBRICK CASE.

To the Editors of THE LANCET.

SIRS,—Having had some experience of criminal trials, I have had numerous letters and inquiries from professional and other friends asking my opinion on the Maybrick case. I have always answered that I believed Mrs. Maybrick to be guilty; and, having read all the evidence as reported in *The Times*, I should be glad to give a short account of my views in your columns.

It is not disputed that Mr. Maybrick died of gastro-intestinal enteritis, which might have been caused by an irritant poison such as arsenic or by some indigestible article of food. The evidence, however, failed entirely to show that Mr. Maybrick took any sort of food that was likely to make him ill or was subject to any natural causes which might produce enteritis. On the other hand, the evidence proved that arsenic was contained in food and medicine which he did take, and also in food which it was intended he should take but did not take. Now, it was not contended at the trial that anyone but himself or Mrs. Maybrick could have been the means of introducing this arsenic into the various articles referred to; and, further, Mrs. Maybrick stated that she, at her husband's request, put a white powder (which was suggested by the defence to be arsenic) into food in which arsenic was found. Now, after this clear evidence that arsenic was present both in his food and medicine, and with evidence that arsenic was found in the body after death, Drs. Tidy and Macnamara come forward and swear that in their opinion Mr. Maybrick did not die of arsenic. They do not know what caused the gastro-intestinal enteritis, but they do know it was not arsenic, because the whole series of symptoms of arsenic poisoning were not present, and the quantity found in the body after death was less than usual. They entirely ignored the fact that in the great majority of cases of arsenic poisoning, where the symptoms have been accurately observed and reported, solid arsenious acid has been used. It is well known that arsenic is usually administered feloniously in puddings or cakes or other solid or semi-solid articles of diet; but it would be very difficult for Mrs. Maybrick to give arsenic to her husband in this form, as she could not well mix it with solids, and in liquids it would not dissolve easily, but a solution from fly-papers would solve the difficulty; it could be quickly and easily dropped into the medicine or soup. Again, fly-papers were easy to procure, and five years ago two women used them for poisoning purposes, and *were not found out* till they had murdered four persons. Another circumstance which was not pressed home at the trial was the mystery about the arsenious acid found in Mrs. Maybrick's possession. Where and how did she get it? Surely, if it was got for an innocent purpose to

kill cats, she might have said where she got it. She was ready enough to give a long account of the fly-papers.

With regard to the medical evidence, the doctors called for the defence appear to have overlooked the fact that a solution of arsenic administered frequently and in small quantities would not be likely to produce all the well-known sequence of symptoms which have been so often described as diagnostic of arsenic poisoning. Neither diarrhœa nor sickness would be so violent, and the presence of petechial spots in the stomach would depend in great measure on violent vomiting; also, inflammation of the eyelids would not be likely to occur except in a chronic case. Lastly, it is improbable that the internal organs would give on analysis the same quantity of arsenic as when administered in a solid or concentrated form.

Judging from the symptoms and analysis of the organs, I have no doubt that Mr. Maybrick died of arsenic administered in his food and medicine; but it was too ridiculous even for the defence to suggest that he himself added the arsenic; therefore, who could have done so but Mrs. Maybrick? She had the motive, she had the arsenic, and she was seen to tamper with the food in which arsenic was found.

I disagree entirely with the evidence given by Drs. Tidy and Macnamara, and how two gentlemen of such eminence as medical jurists could form an opinion that a man dying of gastro-intestinal enteritis, with symptoms of arsenic poisoning (with not a scrap of evidence that anything else caused the disease, and with arsenic found in his food and medicine, and in his body after death), did not die of arsenic passes my comprehension.

My conclusion is that the jury showed good common sense in declining to found their verdict on the evidence for the defence. I am, Sirs, yours obediently,

THOS. BOND, F.R.C.S., M.B., B.S. Lond.,
Late Lecturer on Forensic Medicine at Westminster
Aug. 28th, 1889. Hospital Medical School.

TREATMENT OF TUBERCULOUS GLANDS.

To the Editors of THE LANCET.

SIRS,—The leading article in THE LANCET of Aug. 24th on the treatment of tuberculous glands will be read with great interest by all those called upon to treat this important condition. The point that struck me most in the article was the happy absence of all allusion to "linseed poulticing, iodine, and other temporising local treatment." Margate is perhaps the Mecca sought by most pilgrims in search of a cure for tubercular glands, who do not come under the care of the limited number of surgeons who are specially interested in this branch of operative surgery. Patients arrive here from all parts, with their glands in all stages of disease (except the preliminary stages), with the hope that the Margate air will, unaided, dissolve their dead and dying glands and cause them to vanish. As a rule, they have been treated freely with iodine or prolonged poulticing, with the only result that the vitality of the skin has been impaired, while the glands beneath have passed through their stages of necrosis unaffected. Sometimes patients are even warned beforehand not to allow the Margate surgeons to interfere with the knife, our "gland-thirsty" reputation having been spread abroad. I am aware that there are many experienced surgeons who can relate instances in which enlarged glands of a few weeks' standing, or even a few months, have disappeared during the use of the usual local applications (in addition to tonics, change of air, &c.). But, I venture to think most of these cases are cures *post hoc* rather than *propter hoc*. In my own experience, I have never seen a case of enlarged glands of more than five or six months' standing the least bit benefited by local application, although on several occasions I have observed a temporary condition of peri-adenitis subdued by a lead lotion. I am quite sure if those surgeons who are in the habit of dallying with iodine and the old-fashioned unctuous masses of sodden decomposing linseed meal were to see the condition of the glands excised every operation day at the Royal Sea-bathing Infirmary, they would forgive me for throwing stones at the surgical procedure of a past generation, and treat dead glands as they would treat a piece of loose necrosed bone—i.e., with the knife. It is sometimes difficult to decide whether a gland is past recovery or not; in the majority of instances glands do not disappear if they have been persistently enlarged for about six months, though they may be destroyed in a few days or weeks. I might add that the temperature is, in my experience, almost useless as a guide, for in many instances of advanced disintegration it is perfectly normal. With regard to the operation of erasion or gland-scraping, I regret that my experience has not been the same as the writer of the article. For glands thoroughly broken down into an abscess, it is, of course, the best method; and there are cases in which the gland is throughout its extent a cheesy mass; these also admit of satisfactory scraping. But by far the greater majority of cases that come under one's care are those in which glands are enlarged and contain various quantities of cheesy débris. The cheesy part one can scrape away if one happens to hit it off, but the hard hypertrophied part cannot be removed without unjustifiable violence, and it has to be left, with the certainty of its following the fate of the rest of the gland, and eventually it will be discharged through the cicatrix of the original wound, or, more likely still, the wound will never heal up till it has gone. Having found out these facts by experience in my own practice and that of my colleagues, I invariably excise all glands that are enlarged. If by any chance a gland is left, it will surely need a further operation. Sometimes the operations are extensive, but one is less likely to have mischief with a free incision than in poking about deeply in the neck with a small puncture. A few weeks ago I removed over seventy glands from one side of the neck of a boy of twelve, and the wound was practically firmly healed in from eight to ten days; they had existed nearly all his life. It is perhaps a matter of opinion and taste as regards the scar. Personally, I think one long clean scar is better than a number of isolated and perhaps puckered ones. At any rate, it should not in these days be a matter of opinion as to the advisability of removing dead and dying glands with the knife or spoon. It is as idle and unsurgical to hide a permanently diseased gland under a poultice or film of iodine paint, and hope that the ordinary pathological laws may be suspended and that the dead gland may mysteriously vanish, as it is to foolishly tinker with an abscess without opening it, in the feeble hope that it may be one of those rare abscesses that are good-natured enough to cure themselves. Apologising for the length of this letter,

I remain, Sirs, yours truly,

BERTRAM THORNTON, M.R.C.S., L.R.C.P. Lond.,
Surgeon to the Royal Sea-bathing Infirmary,
Aug. 26th, 1889. Margate.

ANÆSTHETICS.

To the Editors of THE LANCET.

SIRS,—Of all the questions which have exercised the medical mind for the last forty years, probably that of anæsthetics has been the most constant, and, one might fairly say, the most vexed. Since Sir George McLeod's address at Glasgow last year the discussion has lulled perceptibly, and what has been written has been too theoretical and inauthoritative, and has borne too much the mark of the pen of the scribe to interest or satisfy practical inquirers. Sir George McLeod, however, spoke from a full and ripe and practical experience of anæsthetics, dating from their earliest introduction into surgical practice, and he spoke, "ὡς ἐξουσιαν ἐχων, καὶ οὐχ ὡς οἱ γραμματεῖς," and gave to the medical world a well-weighed, almost solemn, verdict in favour of chloroform. Perhaps there are a few, but there cannot be many, who can speak as he did from a practical experience of over forty years; but there must be many who, like myself, can speak from an experience of a daily administration of anæsthetics for five-and-twenty years or more. I think the time has come when we should no longer keep silence, for our experience has a peculiar value, inasmuch as it was, *quâ* chloroform, very extensive and well-founded, before nitrous oxide had left the side of the dentist's chair or had ever been exhibited in the operating theatre; before Sir Spencer Wells advocated bichloride of methylene as the very best of anæsthetics; and long before ether had struggled into use and fashion. By us, I can truly say, each new anæsthetic as it was brought out was eagerly and carefully weighed in the balance, our standard always being, of course, "chloroform *properly* administered." Nitrous oxide is still of great use to us; methylene is, I believe, but rarely employed. Clover soon taught us that ether was not the unmanageable and disagreeable agent that we at first took it to be. He

removed for us some of its then-to-fore insuperable disadvantages, and now, of course, all good and competent anæsthetists recognise its use and value. We cannot admit, however, that it is either so safe, so convenient, so universally applicable or so agreeable, even when most skilfully administered, as its almost perfect sister, chloroform; and, I believe, we agree almost to a man entirely with Sir George McLeod. We have to thank Mr. Teale for reverting to the subject in his address in the Surgical Section at Leeds last week, and for giving us the result of his experience, though it took the form of a sort of counterblast in favour of ether.

The experiences of these two authorities are as widely different, as are their conclusions. Let me recall what Sir George McLeod said at Glasgow last year. He said, that "*for speed and energy, for ease of application and agreeableness, for rapid recovery with little subsequent trouble, and for safety when properly administered, chloroform is unrivalled.*" Mr. Teale this year, *ex eâdem cathedrâ*, lays down that *ether, if properly administered*, can be given, *tute, cito, et jucunde;* but, quotes Mr. Teale, "non cuivis homini contingit adire Corinthum," and this he translates, for the benefit of his hearers, "*it is not every one who knows, and there are some who are incapable of learning, how to administer ether, even with a Clover's inhaler.*" Let me ask, if this quotation is so applicable to etherists, surely is it not much more applicable to chloroformists? And, in argument, ought it not to be applied, in justice, equally to both? Many times since ether became in vogue have I witnessed its administration at the hands of old and young. With few exceptions, and as a rule, the exhibition has been painful in the extreme, and to those who know how ether should be administered, and who know also the virtues of chloroform, it is not too much to say barbarous and reprehensible. *Tutus* it certainly is *not*. And I believe the patients when they tell me, as they almost daily do, that the process is very far indeed from *jucundus*. Nearly every day patients declare to me their aversion to ether and their preference for chloroform. In my own practice I very frequently come across those who cannot take ether, however carefully and skilfully administered. Perhaps I see more than my share of these, for it is well known that I never yet have refused chloroform to anyone. As to the *cito*, the "saving of time," I say, without fear of contradiction, that time is a factor which a competent anæsthetist never dares to take into consideration.

Mr. Teale speaks of the "comfort and convenience" it has been to him while operating since he allowed his assistants to give ether to his patients instead of chloroform. My only answer to this is that an operating surgeon has omitted part of his duty if he has failed to secure the services of a competent anæsthetist for an operation; and if he has done his duty to himself and patient in this respect, I fail to see where the question of "comfort and convenience" to him comes in. Dr. Joy Jeffreys in 1872, we are reminded by Mr. Teale, urged the "fearfully increasing fatality of chloroform." This, at the time, as reference to the medical journals of the date will show, was, to say the least, a great exaggeration, and each year's experience since has given it an ever-increasing refutation. The alarmists, who do such incalculable harm by their cry that "ether is safe, chloroform is dangerous," utterly ignore the fact that in this island alone chloroform is given every day to at least from 1500 to 2000 individuals, or, say, to about 600,000 per annum. And how rarely do we hear of a death *under* it; *from* it almost never. For five-and-twenty years I have never, on any one single occasion, refused chloroform to anyone, and I have given it to those suffering from all forms and conditions of bodily disease—of head, heart, lungs, kidneys, and all other viscera. With my own hands I have given it to not less than 5000 of my fellow-creatures, and have witnessed its administration by others hundreds of times. I give chloroform, or ether preceded by chloroform, as part of my everyday routine, where pain may be thereby remitted, on every possible occasion. It has not yet been my misfortune to witness a fatality under any anæsthetic, but I deem it right to be ever expectant that the dread disaster may one day befal me. Yet I venture in all humility to hope that, should it ever happen, neither I nor the drugs may be justly held blamable, and that my confidence in the use of my trusted agents for the relief of pain may be by such an accident in no degree impaired. Of the many advantages of chloroform, there is one, and not the least, which has received too little attention—namely, that with it we are enabled to rob ether of its terrors, terrors most real indeed to those (and they are not a few) whose nature revolts against its nauseous flavour, and to whom the sense of suffocation so frequently attendant on its inhalation, no matter how carefully or how skilfully administered, is absolutely unbearable.

I entirely agree with Sir George McLeod's verdict in favour of chloroform, yet on many main points I have little doubt that Mr. Teale and I would be found in perfect accord. My general view is, that the πραξις of all anæsthetic-giving is simple enough, and easily acquired. Not so the ἐπιστήμη and the τέχνη. As in all higher crafts, the first is easily *taught;* the second can be taught in part only; but the third, the τέχνη, cannot be taught, and can only be acquired by long experience and natural aptitude. Very easily, and with fairly diligent observance of detail and practice, the ἐπιστήμη of ether-giving may be attained, and the τέχνη is now acquired by not a few. But to become an artist in the administration of chloroform, more practice, sounder judgment, keener and more rapid power of observation, and more aptitude, are requisite and essential.

I am, Sirs, yours obediently,

Leeds, Aug. 17th, 1889. JOHN HORSFALL.

"FUNCTIONAL ALBUMINURIA."

To the Editors of THE LANCET.

SIRS,—By an apparently clerical, but still not unimportant, error in the report of the discussion on albuminuria at Leeds, you have made me say that "Dr. Gairdner was still unconvinced that we could talk of *functional* albuminuria." What I really said was that *physiological* albuminuria is, in my opinion, both an inaccurate and a misleading expression; but that I did not so much object to the provisional term *functional* albuminuria, subject to the construction of it given in your report. The essence of my remarks was contained in the phrase you have quoted in your leading article—viz., that albumen, meaning thereby serum-albumen cognisable by the heat and nitric acid tests, even when casually occurring in the urine, is to be regarded as a kind of danger-signal; but that the danger may vary indefinitely in different cases, and is to be estimated according to principles very well expounded by Dr. Pavy and other speakers, but implying always, in proposals of life insurance, a postponement at least, to allow of more detailed and, in some cases, frequently repeated observations, in respect of which the proposer's own medical attendant may often be advantageously informed of the facts.

I am, Sirs, yours truly,

Glasgow, Aug. 24th, 1889. W. T. GAIRDNER.

THE USE OF ROBURITE IN MINES.

To the Editors of THE LANCET.

SIRS,—Before Major-General W. H. Wardell had come to the following conclusion—namely, "while expressing my surprise that the writer of your article should have followed the miners' committee in misreading the report of the experts, &c.,"—it would have been well if he himself had not misread the same report, and had also searched for other reports of the poisonous nature of roburite or di-nitro-benzol. I need only here notice that he states it was proved at the inquest on the man who unfortunately met with his death at the Roburite Works at Gathurst "that the poor man died from the effects upon a weak heart, &c." He then goes on to say "that other healthy men had repeatedly done the same without receiving any sensible harm," whereas at the inquest there was no evidence of the deceased having a weak heart previously to the poisoning, and, again, that the other men had sensibly suffered from cleaning this very flue, and every precaution was laid down for them, and the men were paid double for doing this dangerous work, as well as only allowed to remain a short time in the flue, showing that the authorities knew of the danger the men were submitting to.

I would respectfully call the attention of Major-General Wardell to the following articles which have appeared lately in the medical papers:—On Poisoning by Roburite, by J. Ross, M.D., LL.D., F.R.C.P. Lond.; on Acute Poisoning by Nitro-Benzol, by Dr. Reynolds, M.R.C.P. Lond. (*Manchester Medical Chronicle* for May); on the Effects of Nitro-Benzol, by R. Prosser White, M.B. (*Practitioner* for June); Case of Poisoning by New "Sicherheit" Explosive, by William Sykes, M.R.C.S., and F. Gramshaw

Twigg (*British Medical Journal*, July 20th, 1889, p. 127); Poisoning by "Sicherheit" Explosive, by H. J. Knight, M.R.C.S. (*Ibid.*, Aug. 3rd, 1889, p. 244)—Mr. Knight mentions that in Dr. Swaine Taylor's work a fatal case is reported; and Poisoning by "Sicherheit" (a new Explosive), by John Stokes, M.B., B.S., M.R.C.S. (THE LANCET, Aug. 24th, 1889). Surely, Sirs, no unprejudiced observer would compare the effects of di-nitro-benzol (or roburite) with the fumes of gun-cotton, nor would they find fault with your article for stating that it is "a very poisonous compound," after considering these papers.

I am, Sirs, your obedient Servant,

August, 1889. THE WRITER OF THE ARTICLE.

TASTE FUNCTION OF THE GLOSSO-PHARYNGEAL NERVE.

To the Editors of THE LANCET.

SIRS,—In your otherwise accurate report of the proceedings of Sections at the Leeds meeting I notice two errors in the paragraph referring to my paper on the above subject. I am reported to have said: "There was some pain and numbness, which might be due to the interference with the blood-supply to the descending tract on that side." This should be: "The partial hemiplegia was to be accounted for by the interference with the blood-supply of the descending tract." Your report also has: "The evidence of pressure on the nerve was the loss of taste on one side of the tongue." As the object of the paper was to show that loss of taste having occurred owing to pressure on the nerve, therefore the glosso-pharyngeal must be considered to be a nerve of taste in opposition to the view held by Dr. Gowers, the concluding paragraph as reported would be a begging of the entire question, and have no bearing on the object of the paper.

As the former of these two errors represents me as having made a mistake impossible even to a beginner in neurology, I trust you will be able to find room for this correction.

I am, Sirs, yours obediently,

Leicester, Aug. 26th, 1889. FRANK M. POPE, M.B., M.R.C.P.

ECTOPIC PREGNANCY.

To the Editors of THE LANCET.

SIRS,—Mr. J. N. Thomas's admirably narrated case is one of the many observations which are being rapidly accumulated to prove that "clear and decided teaching on the theory and practice of extra-uterine pregnancy" has at last been arrived at. There can be no doubt that Mr. Thomas's patient had a tubal pregnancy, and that on April 23rd the tubal expansion ruptured into the cavity of the right broad ligament, forming the extra-peritoneal hæmatocele, which requires no treatment as a rule. In the cataclysm the ovum died, and the whole thing was quietly absorbed, as extra-peritoneal hæmatoceles generally are. The case, in fact, forms a perfect illustration of variety *e* of tubal pregnancy in the scheme given on page 8 of my book on "Ectopic Pregnancy and Pelvic Hæmatocele."

I am, Sirs, yours obediently,

Birmingham, Aug. 22nd, 1889. LAWSON TAIT.

MR. WHEELHOUSE'S ADDRESS.

To the Editors of THE LANCET.

SIRS,—I hope the above address will be brought under the notice of the general public, and that the attention of members of Parliament will be especially called to those portions of it which have reference to pupilage as the best mode of commencing medical studies. The Privy Council is now medical king, and to it and not to the medical corporations must the mass of the profession look for the reform so ably advocated by Mr. Wheelhouse. Hence the necessity of putting the address in lay hands. I would suggest to Mr. Wheelhouse to republish it in pamphlet form and send a copy to each member of the Legislature and to each Privy Councillor. I would observe that in order to make pupilage a reality it should be registered from the commencement of the apprenticeship, otherwise practitioners would be found base enough to sign certificates for apprenticeships never served. There should also be some proof that the practitioner possessed opportunities for teaching, and possibly even the will and capacity to teach. The great English Colleges throw no obstacle now in the way. It is different with their obscure Irish rivals. Intending students and candidates for diplomas would best consult their own interests by turning their faces Londonwards, as three-fourths of them ultimately will find employment outside Ireland. Let me, in conclusion, call the attention of medical members of Parliament and of the whole profession to the new Dublin Hospitals Bill, and to ask them to insist that no hospital shall under that Bill be allowed to dip its hands into the pockets of the taxpayers which does not consent to throw open its medical appointments to public competition. Is it to be tolerated that our taxes are to maintain institutions which select their staffs by the system which prevails at present in Dublin? I am, Sirs, yours truly,

Cashel, Aug. 22nd, 1889. T. LAFFAN.

THE PREVENTION OF INFECTIOUS DISEASE.

To the Editors of THE LANCET.

SIRS,—Allow me to suggest to Mr. Ritchie through the medium of your columns that he should bring in a Bill to compel every landlord, on letting his house, to produce, under a heavy penalty in default, a certificate of recent date, from one holding a recognised public health diploma, stating that the sanitary condition of the house about to be let is in every way perfect. In those cases where the rent is below a certain figure the certificate might be granted by the qualified district inspector for a certain minimum amount. The necessity for some such law may be shown by the following case. I was a short time ago called to see a gentleman suffering from diphtheria, and, after going over the possible causes of the attack, asked him as regards the sanitary condition of his London office. This, he assured me, was all right, as he had had the place inspected by a builder a short time ago. However, I was not satisfied, and requested him to have a properly qualified man to look into the matter thoroughly. To this he consented, and the result was that the house was shown to be in a wretchedly unhealthy state, and the sewer gas to be constantly pouring into the room in which he sat. Now, I ask, what good dual notification would have brought about here? The *origin* of the disease would never have been traced out by it, and several cases might have arisen in other districts by means of the persons who occupied the other equally unhealthy chambers. If Mr. Ritchie will bring in a Bill of the character suggested, he will receive the thanks of all true sanitary reformers, and I do not hesitate to assert that more good will result to the public health in consequence than will ever be brought about by the system which is being so persistently urged upon him by certain members—viz., dual notification.

I am, Sirs, your obedient servant,

Surbiton, Aug. 24th, 1889. F. P. ATKINSON, M.D.

ANTIPYRIN IN CANCER OF THE CERVIX UTERI.

To the Editors of THE LANCET.

SIRS,—I find it highly advisable, for the benefit of patients and for further experiments, to communicate to the profession the favourable result I have obtained by the use of antipyrin in a case of cancer of the cervix uteri, the pain being immediately subdued after its administration. Though this beneficial effect was of short duration, still it was of great importance and satisfaction to the patient. Being summoned to see a European lady, from Port Natal, apparently under forty years of age, I found her suffering from cancer of the cervix uteri in an advanced stage. She complained of severe lancinating pain, worse at nights, disturbing sleep, and of intense fetor of the discharge, and of many other discomforts. She also stated that, having consulted several physicians, she had obtained no relief. The characteristic severity of the pain and fetor of the discharge had reduced the patient to a pitiful condition. It occurred to me that antipyrin perhaps would do her some good, so I prescribed ten grains of it to be given at once in my presence, and great was my surprise, and still greater the satisfaction of the patient, to find the pain, which was so severe before, immediately subdued. Now I repeat the same when the pain comes on, and have observed no unpleasant symptoms arising attributable to antipyrin. I shall communicate any further results.—I am, Sirs, yours faithfully,

M. V. C. MARQUIS, F.S.Sc. Lond., L.R.C.P., &c.

Bombay, July 30th, 1889.

BIRMINGHAM.

(FROM OUR OWN CORRESPONDENT.)

Medals to Nurses.

AN interesting ceremony was enacted at the General Hospital on the 23rd inst. The chairman presented on behalf of the committee a medal to each nurse who had been three years in training, and whose character and competence justified it. There were about twenty recipients. The medals are of silver in the shape of a Maltese cross; in the centre is a monogram "G. H. B.," surrounded by a wreath of oak and laurel leaves. On the back of each is the name of the nurse, with the dates on which she commenced and completed her training. The way in which the work and worth of the recipients are thus recognised will be a valuable incentive to others to do likewise.

The Eight Hours Movement.

A memorial from the gas workers employed by the Corporation has been drawn up, petitioning for the reduction of the hours of labour from twelve to eight per day. They set forth the arduous and unhealthy nature of their occupation, and the fact that in London, Liverpool, and some other places the request has been conceded. If this demand is granted it will make about £17,000 difference in the wages, a heavy item on the working expenses of the undertaking. The movement is not confined to this class of workmen, the tendency being general in favour of the eight hours system for the British workman.

Anti-vaccinationists.

A distraint upon the goods of some ill-advised people for non-payment of fines imposed for the neglect of vaccination has given the opportunity for a meeting to be held in order to protest against the law. As usual, there were fierce denunciations of the existing order. The audience was small, but this was atoned for by those who conducted the meeting. Even an adjourned meeting was insufficient to excite much enthusiasm, and, beyond the usual declamations, the proceedings may be regarded as having been very tame.

Birmingham, Aug. 28th.

NORTHERN COUNTIES NOTES.

(FROM OUR OWN CORRESPONDENT.)

The late Railway Disaster at Ryhope.

IT now appears tolerably certain that at least fifty persons have been more or less injured by the accident to the Liverpool, Leeds, and Newcastle express train at Ryhope, near Sunderland, on the 19th. The more serious cases have been taken to the Sunderland Infirmary, where they are under treatment, and, I understand, doing well. Dr. Murphy, who was attending the Leeds meeting, was just too late for the unfortunate train, but, following by Durham, he was in time to attend to his cases in the Sunderland Infirmary which were brought in after the accident. We are beginning to hear of some of the remote effects of the accident. For instance, an elderly gentleman, retired from business, but residing at Ryhope, was amongst the first of a large number of peop'e who rushed from the village to render whatever aid might be required by the unfortunate passengers. An additional source of excitement which seemed to add to the other was the fact that it came to his knowledge that one of his grandchildren was in the ill-fated train, and had narrowly escaped a violent death. On his return home he did not seem well, but was able to go about until an hour or so of his death, which took place two days after the accident, to the great surprise of his friends. Lieutenant-Colonel Hutchinson, as an inspector from the Board of Trade, has arrived at Ryhope, and is holding a private inquiry into the cause of the accident. The public will have to await the report of the Board upon the matter before they learn to what the court of inquiry ascribes the accident.

Death of Mr. C. Tennant, M.R.C.S.

The inhabitants of a wide district between Durham and Sunderland were grieved to hear of the death of Mr. Chas. Tennant, surgeon, of Newbottle House, on last Saturday. Mr. Tennant, who studied at Edinburgh, was an M.R.C.S. Eng., and had practised in the villages of the north-east of Durham for thirty years. He was a kind friend to the poor and courteous to all. In his earlier career he had acted as ship's surgeon in whaling expeditions off the coast of North America, and his narration of his experience there and amongst the frozen regions of the Esquimaux was a pleasure his friends were ever eager to enjoy. The writer of this notice has heard him, also, leave these ice fields, in conversation, and pass on to the pleasant hunting fields of Leicestershire; and here he was always at home, and in his day has often "ridden to hounds." "I was my brother's rough rider," he would assert, with pardonable pride, "when he owned six hunters." Mr. Tennant was a native of that far-famed hunting county, and his love of sport was in-bred. Mr. Tennant was also a remarkably fine shot, and regularly went every season to his shooting preserves in the north. He was a man of fine features and presence, standing over 6 ft. 3 in. in height, and proportionately built; and although he was about seventy years of age he looked much younger, and apparently likely to live many years when the writer of this saw him a few months ago. But since then his district has been ravaged by enteric fever, and "the old doctor," as he was affectionately called by the people, was severely worked day and night, the incessant toil making heavy inroads on his strength. He leaves two sons and one daughter. Mr. Tennant was always ready to take an active part in any movement likely to benefit the people of his district.

Death of Mr. J. Jobson, F.R.C.S.

Mr. John Jobson, F.R.C.S. (Bishop Auckland) died at his residence on Saturday last. Although he had reached the age of eighty, and his health was failing lately, his death was somewhat unexpected. Mr. Jobson was a nephew of the late Dr. Frost of Newcastle, with whom he served a portion of his apprenticeship, also with Dr. Leighton, a well-known practitioner at that time in Newcastle, where I believe he had Dr. Embleton as a fellow pupil. Mr. Jobson distinguished himself in the cholera epidemic in Newcastle and Gateshead in 1831, and shortly afterwards removed to Bishop Auckland, where he was some time a partner with Dr. Canney, senior. Mr. Jobson was for a long time the foremost surgeon in the district, being a good operator and all-round practitioner. He took an active interest in the Volunteer movement from its commencement, and rose to the rank of colonel. He was also a J.P. for the county, and one of the presiding magistrates on the Auckland bench for over twenty years. His funeral, which took place on Monday last, was attended by a large number of the local gentry and tradespeople as well as medical practitioners.

Newcastle-on-Tyne, Aug. 28th.

DUBLIN.

(FROM OUR OWN CORRESPONDENT.)

The Dublin Hospitals Board Bill.

IT is satisfactory to learn that this Bill has been discharged, and therefore it will be unnecessary to give a *résumé* of its provisions; but a few observations on an unsatisfactory measure bearing on the objections which must strike the most casual observer may not be out of place. One very important objection to the Bill was the proposal that every hospital participating in any grant should contain not less than 80 beds, and after five years not less than 100 beds, in daily occupation throughout not less than nine months of the year, in respect of which a grant was made. This condition, however, did not apply to the two lying-in hospitals. Now, if we examine the last return of the hospitals which at present participate in the Government grant, we find that the average daily number of beds occupied in those institutions was as follows:—Steevens', 78; Meath, 84; Cork-street Fever Hospital, 43; St. Mark's Ophthalmic Hospital, 42; and the Hospital for Incurables, 167. It follows that the last-named institution and the Meath could only participate in a grant under the proposed Bill. Besides this, each institution obtaining a grant must have not less than fifty paying students on its books during the year, and as the majority of the Dublin hospitals are comparatively small institutions this proviso would disqualify, with few exceptions, every hospital in the city.

Further, the Adelaide Hospital, one of the largest and best-managed institutions in Dublin, in consequence of an adverse clause in the Act, would not get a farthing; while, on the other hand, the Mater Misericordiæ Hospital, which does not at present participate in the Government grant), and which, I believe, is well endowed, would, under the Bill, take the lion's share of the suggested grant of £11,500. My last objection is that by the Bill it is proposed that the compensation (if any) to be given to those medical gentlemen who may be deprived of their offices by the closure of the institutions with which they are connected should be subtracted from the £11,500, the amount of the grant, instead of being paid by the Treasury out of a separate fund. If the Bill is ever to become law, it must be materially changed, otherwise the opposition against its passing must be fatal.

Royal Hospital for Incurables.

The Victoria Jubilee Wing is now completely finished, and in the four wards there are at present ninety-one patients. These wards are airy and cheerful, and possess every modern improvement which can ameliorate the condition of the inmates.

Royal University of Ireland.

The Marquis of Dufferin, the Chancellor of the University, will preside at the public meeting for the conferring of degrees, to take place on Monday, Oct. 28th.

Dublin, Aug. 27th.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

The International Congress on Hypnotism.

Of the many Congresses recently held in Paris, that on "Hypnotism, Experimental and Therapeutic," if not altogether the most interesting, was, at any rate, the most novel, for it was the first International Congress ever held on this subject, and, in fact, one of the rare attempts made by competent men assembled together to rescue it from the hands of charlatans, quacks, and conjurors. Speaking generally of the medical profession, and especially of the English section of it, the tendency hitherto has been to look askance on the whole surroundings of the alleged phenomena, associated with what is known since recent times under the name of "hypnotism." Nay, more: the inclination to look with dubious misgivings on anyone in the profession who meddled in the matter, or who claimed any therapeutic or other good effect, or even real existence, for the cerebral phenomena in question, has been manifestly the fashion; rather has the whole thing been condemned or passed over as deceptive or hysterical trickery. Enthusiasts have from time to time arisen in its defence, who, in claiming everything for it, have, like most enthusiasts, ridden their hobby to death, but who have, doubtless, in a large measure owing to this exaggerated faith, hitherto only succeeded in burning their fingers. Warned by such examples and the general suspicion pervading the whole hypnotic atmosphere, ordinary individual inquirers have, with comparatively rare exceptions, until now, rather suppressed the natural curiosity within them to probe the matter to the bottom, or have done so, as it were, by stealth; and hence, whatever there is, good or bad, false or true, in these mental phases has been entirely abandoned to mountebanks and showmen. This certainly seems, after all, a puerile attitude to adopt in reference to the question. It would appear better, instead of looking upon it as a double-edged tool and relegating it to the realms of doubt and suspicion, or putting it out of sight in the shade of some abstrusely written psychological and rarely read volume, to bring it manfully into the light of ordinary medical instruction and discussion, so that general experience and inquiry might elucidate it, and by so doing finally condemn or establish it in its claim to a respectable existence or its right to be admitted amongst our therapeutic methods. Now the Congress just held marks the first serious effort to bring together the scientific men of different nations for the express purpose of arriving at an international understanding on the subject. It held its sittings in the Trousseau lecture theatre of the Hôtel Dieu, which was tastefully decorated with the flags of the several European and American nations, but which proved much too small to contain the number of members and visitors. Over a hundred medical men, French and foreign, responded to the summons of the organising committee. Amongst the foreign were MM. Dekhterew of St. Petersburg, Delbœuf of Liège, Forel of Zurich, Ladame of Geneva, Masonin of Louvain, and Semal of Mons. M. Dumontpallier, the President, at the opening sitting, traced rapidly the history of scientific hypnotism, the progress of which was in a large measure due to the researches of the school of the Salpêtrière and of that of Nancy, but the popular knowledge of which in the profession dated back to very recent days only. The study of scientific hypnotism, said the speaker, began in 1876 only, when a commission was nominated by the Biological Society to report on the experiments in metallo-therapie of Burq. The recognition of certain effects produced by metals led the commission to the study of hypnotism, which produced analogous phenomena. M. Dumontpallier, at the Hôpital la Pitié, and M. Charcot, at the Salpêtrière, carried on this inquiry. Then the Nancy school, directed by Liébeault, Bernheim, and Liégeois, worked out one branch or factor in hypnotism—viz., suggestion,—which it made peculiarly its own. Indeed, M. Bernheim endeavours to show that under suggestion may be included nearly all the hypnotic phenomena. It is undoubtedly a powerful element, but many other procedures and physical agents may be used to bring about the hypnotic state independently of suggestion. Thanks to the works, then, of Ladame, Grasset, Voisin, Yung, Delbœuf, Forel, Mesnet, and Azam, hypnotism now finds its place in the academies, and no longer meets with opposition from scientific minds. It was still, however, necessary, in order to place this progress on a solid basis, that all experiments should be conducted with scientific reserve and closely criticised, and to consider nothing as a demonstrated fact unless it were confirmed by all or the majority of inquirers. Such in *résumé* was the opening address of the President. The first question which was put before the meeting for consideration was, "The prohibition of all public performances in hypnotism and the necessity of putting hypnotism under legal control." M. Ladame of Geneva strongly insisted on the necessity of interdicting all public displays of hypnotism. The discussion at the Academy of Brussels in 1888 sufficiently revealed the dangers to be apprehended from such displays. He himself had seen at Neuchâtel a veritable post-hypnotic epidemic. MM. Bourdon and Dekhterew supported M. Ladame, and added that the last Russian Psychological Congress had voted prohibition. Finally the proposition was put to the vote and carried, and to it was added the following resolution, which was also carried—viz., "That it is desirable that the study of hypnotism and its therapeutical applications be introduced into the curriculum of medical education." MM. van Renterghem and van Eeden of Amsterdam, next communicated the results obtained in the treatment of 414 cases made up of organic diseases of the nervous system, neurotic, mental, and neuralgic cases, &c. The method adopted was the Nancy one by suggestion. In 71 cases there was no result, in 92 slight amelioration, in 98 marked amelioration, and in 104 cases cure; 57 cases were not worked out. After this the Congress proceeded to the discussion of the second question—viz.: "What is the relative value of the different methods of bringing about the hypnotic state and of augmenting suggestion from a therapeutic standpoint"? M. Bernheim, in discussing these points, said that to define hypnotism as induced sleep was not sufficient, for all hypnotised subjects do not sleep. Some have profound sleep, with amnesia on waking; others also sleep deeply, but recollect their hypnotic period; a third category fall into a light sleep only; and, finally, there are others who do not sleep, or believe they do not. The degree of suggestibility varies with each one of these groups, and is very high in the first; the second are also subject to fairly complete suggestion, but in the remaining groups it is incomplete. For example, one can obtain suggestion of movements and sensation, but not hallucinations. A subject may, however, pass from one to another of these categories. The hypnotic condition, then, is not mere sleep, but a peculiar psychical state, the sleep indicating a profound condition of suggestibility only. The first method employed to bring about hypnotism is that known as Braid's, which consists of fixation by means of some brilliant object. This is the method employed, more or less modified, by the Salpêtrière school to bring about that which is called "le grand hypnotisme" and its three stages. The second method is that which is known as the "verbal suggestion" of

Faria. Besides these, there are various other methods, all of which may be successful provided the subject is forewarned. All these methods sum themselves up under suggestion. The fatigue caused by the fixation of vision and the divers passes only acts by "suggesting" the idea of sleep. The so-called hypnotic zones do not exist providing suggestion is avoided. Since all resolved itself into suggestion, "verbal suggestion" was, in the speaker's opinion, the best method. Here he described in detail the methods and practice of verbal suggestion which are to be found in his book on hypnotism. The greatest difficulties experienced by a novice in operating came from "contre suggestions," which resulted from his own hesitations, none of which escaped the observation of the subject, but with practice one can in hospital service hypnotise nine out of ten patients. In order to awaken them, affirmation sufficed, provided it be done without hesitation. M. Bernheim went on to say that suggestion is possible even in a state of wakefulness in certain subjects, in whom every idea is immediately transformed into an act as if the cerebral initiative had not time to intervene. What he called suggestive psycho-therapeutics had for its object the cure of the patient by causing his brain, whether hypnotised or not, to be possessed of the persuasion of cure or the cessation of his symptoms. Suggestion, he declared, had always been exercised, although unconsciously, by physicians. The prescription of inert substances under scientific names was nothing less, and he would add his firm belief that the different methods of hydro-therapeutics, electro-therapeutics, and even the much-discussed suspension in tabes, acted in a like manner. Let us admit, then, concluded the orator, the importance of the *rôle* which the mind has in morbid phenomena, and allow that, as we had psychology, so we had also psycho-therapeutics.

The Levick Institution of English Nurses in Paris.

This is an institution, recently established to supply a want in this cosmopolitan city, which needs only to be known to be appreciated. Our medical *confrères* in the United Kingdom will be glad to know that when their patients come abroad they can, if needed, be provided with an English nurse who has received a thorough training in the hospitals of her own country. It will also be equally welcome to our *confrères* practising on the Continent, who, having received their medical education in British schools, carry with them into practice their British methods and traditions, which there is no gainsaying vary in those many little details which serve to differentiate continental from British medicine, and the sum of which details goes to make up the feeling of comfort, and therefore the greater prospect of recovery, which the English invalid abroad, accustomed to his national habits both in sickness and health, experiences when treated by a British graduate and tended by a British nurse. The institution is situated at 34, rue de Prony, close to the Parc Monceau. Competent nurses can be sent on the shortest notice to any part of the Continent, on receipt of letter or telegram. The registered telegraphic address is "Nurses, Paris."

Paris, Aug. 27th.

BERLIN.

(FROM OUR OWN CORRESPONDENT.)

The Next Congress of German Naturalists.

THE next Congress of the German Naturalists is to be held in Heidelberg, and to last from Sept. 18th to the 23rd. Simultaneously with the Congress there will be an exhibition of scientific apparatus, instruments, and preparations in the Gymnastic Hall of the town. Meyer of Göttingen will lecture on the Chemical Problems of the Day; Volgar of Frankfort on the Life and Works of the Naturalist, Dr. K. Schimper; Hertz of Bonn on the Relations between Light and Electricity; Puschmann of Vienna on the importance of History to Medicine and the Natural Sciences; and Brieger of Berlin on Bacteria and Disease Poisons. A banquet, a ball, a *fête* in the old palace, and excursions in the lovely environs will relieve the graver labours of the Congress, and the palace will be illuminated on the last evening.

Prussian Statistics for 1887.

In 1887 there died in Prussia 358,028 males and 328,142 females, and 24,579 males and 19,327 females were stillborn. The death-rate was 23·9 per 1000—25·4 of males, and 22·5 of females. Since 1875 the death-rate had never been so low; 260·7 boys and 218·4 girls per 1000 died in their first year, 66·5 boys and 63·7 girls in their second. For the higher ages the death-rate was as follows:—

Years.	Males.	Females.
From 3 to 5	20·2	19·9 per 1000
„ 5 to 10	8·1	8·4 „
„ 10 to 15	3·6	4·1 „
„ 15 to 20	4·7	4·3 „
„ 20 to 25	6·6	5·5 „
„ 25 to 30	7·3	7·3 „
„ 30 to 40	10·6	9·4 „
„ 40 to 50	16·1	11·3 „
„ 50 to 60	26·3	19·0 „
„ 60 to 70	50·6	43·4 „
„ 70 to 80	107·4	101·0 „
Above 80	228·2	217·8 „

The following were the ratios of deaths per 10,000 from the various undermentioned causes:—Small-pox 0·05, scarlet fever 2·90, measles and rubeola 4, diphtheria and croup 17·64, whooping-cough 5·07, typhus 2·64, petechial fever 0·03, dysentery 0·35, rheumatic fever 0·59, tuberculosis 29·33, cancer 3·83, apoplexy 10·8, pneumonia and pleurisy 14·81, heart diseases 2·71, brain diseases 5·36, diseases of the kidneys 1·99, child-bed 2·09, consequence of accidents 3·96, murder and manslaughter 0·13, and suicide 1·77. In 1883, 6171 persons committed suicide in Prussia; in 1884, 5900; in 1885, 6028; in 1886, 6212; and in 1887, 5898. Of the suicides of 1887, 4703 were males and 1195 females. In 1559 cases the cause assigned was insanity, in 646 grief, in 606 vice, in 592 life-weariness, in 519 physical disease, in 455 shame and remorse, in 193 passions, in 181 vexation, anger, and quarrelling, and in 32 sorrow for bereavement. It is noteworthy that insanity was the cause, or is alleged to have been the cause, in 41·1 per cent. of the women and only in 22·7 of the men—a fact which may be partly explained by the circumstance that insanity is often alleged as the cause of suicide by relatives &c. to veil the real motives. It is also remarkable that grief, which is generally supposed to depress women more than men, is a much more frequent cause of suicide in men than in women. This cause is assigned in the cases of 11·6 per cent. of the men and only of 8·5 of the women. Under the heading of "passions," on the other hand, of which probably love is the chief, the women greatly preponderate, their percentage being 6·5 and that of the men only 2·5.

The Triumph of Medical Science in the Prussian Army.

In a speech at the celebration of the anniversary of the founding of colleges for the training of physicians and surgeons for the Prussian army, Surg.-General Dr. von Coler stated that the number of cases of illness in the Prussian army had sunk 46 per cent., the death-rate 54 per cent., the number of typhus cases from 10·9 to 4·4 per cent., and the loss to the army by typhus from 2·1 to 0·32 per cent., between 1868 and 1887. The reduction of the death-rate means a gain to the State of 1564 soldiers a year.

Cholera in Mesopotamia.

The *Allgemeine Zeitung* of Munich hears the following from Constantinople: "Cholera broke out in Mesopotamia on July 27th, in the same mysterious manner as in Egypt in 1883. That it came from Bombay, *viâ* Bassora, is certain; how, has not yet been determined—perhaps, as in Egypt, in the persons of Arab stokers, who serve on board the English steamers of the Bassora-Bombay line, and go home on their arrival at Bassora. It appeared first at Sehatra, a place of 3000 inhabitants, two and a half days' journey from Bassora, on the canal Schate el Hay, which unites the Tigris with the Euphrates; 308 persons died between July 27th and Aug. 6th. On Aug. 1st it broke out at Nassrié, a place of 8000 inhabitants, south of Sehatra, and near the junction of the Schate el Hay with the Euphrates: 293 persons died there between Aug. 1st and 9th, of whom eighty-five died on the 8th alone. This town has a swampy flat, and consists of mere reed huts. Its main industries are rice-growing and, in a less degree, cattle-breeding. The epidemic broke out in Bassora on Aug. 6th, and its first victim was an Arab girl, who had arrived from Filie in Persia ten days before. The number of deaths on the 9th inst. was fifteen. The reports of the medical officer, Gazala, leave no room for doubt as to the diagnosis."

Dr. Robert von Helmholtz.

Dr. Robert von Helmholtz, a son of the famous scientist, died here two or three weeks ago, aged only twenty-eight.

Though the time allotted him was so short, and his life much marred by delicate health, he has left behind him a series of scientific writings not unworthy of the great name he bore. They are almost all of a strictly scientific character, and treat of vapours and mists, the relations between the freezing-point and steam tension, and experiments with a steam jet. They are of practical value in meteorology. Only one of Robert von Helmholtz's writings penetrated to non-scientific circles. It was published in the *Deutsche Rundschau*, and contains the author's boyish reminiscences of the famous physicist, Gustav Robert Kirchhoff, when the latter and Hermann Helmholtz, then Professor of Physiology at Heidelberg, lived and worked in the same house in the beautiful town on the Neckar. Young Helmholtz's chief teachers were his own father and Robert Bunsen. It is sad to think that one who had gained so high a place among the younger scientists of the age has not been permitted to fulfil the brilliant promise of his youth, and add new lustre to a distinguished name.

Berlin, Aug. 21st.

NEW YORK.

(FROM OUR OWN CORRESPONDENT.)

Census of Mortality and Vital Statistics.

THE eleventh census of the United States is about to be taken, and the superintendent has issued a circular to the medical profession. As we have no national system of registration of vital statistics, our census affords the only opportunity of obtaining an approximate estimate of the birth and death rates of much the larger portion of the country, which is entirely unprovided with any satisfactory system of state or municipal registration. To secure the co-operation of medical men, the Census Office has issued a blank physicians' register of deaths to the entire profession, with the request that, commencing on June 1st, they will enter the death of each person coming under their own cognisance, with all the particulars of sickness, &c. When the year has expired, these registers will be returned to the central office for statistical reduction.

New Building for the Academy of Medicine.

The Academy of Medicine is about to erect a new and commodious building in a more central portion of the city. The allotted space measures 75 by 100 feet. The building will be five stories high. The interior arrangement provides a large audience room, a library room with a capacity for 230,000 volumes, section rooms accommodating respectively 160, 225, 275, and 110 persons, rooms for laboratory and microscopic work, and rooms for study, smoking, and conversation. Such a building has long been the great want of the profession in this city. When completed it will unite in one interest all of the now scattered societies.

Execution of Criminals by Electricity.

Although the law requiring the execution of criminals by electricity in this State came into operation on Jan. 1st last, the execution of the first criminal by this means has been stayed by judicial proceedings taken to determine the effectiveness of the method and the constitutionality of the law. A large amount of evidence is now being taken as to the power of electricity, when created by apparatus, to destroy human life. It now appears that the resistance of the human body is liable to be such that the electrical current will not destroy life, but will only temporarily paralyse. Edison, the inventor, takes strong grounds in favour of execution by electricity, and declares that death can be effected with the greatest precision; but many experts in the use of electricity disapprove the method. The final report of the referee will be awaited with interest. Meantime the preparations for the execution are steadily progressing.

Payment for Reports of Births.

There has been much complaint among medical practitioners of the injustice of being compelled to report births and deaths, and pay the postage on their reports, without compensation and under heavy penalties for neglect. This sense of wrong has led many physicians to neglect such reports, and the results of such neglect are seen in vitiated vital statistics. One State, Massachusetts, has applied the proper remedy—viz., the giving of a fee of a quarter of a dollar for every birth reported in proper form. The effect of this liberal law has been to greatly increase the number of cases reported.

Prevention of Quackery in the new States.

The rapid formation of new States, with complete forms of government, now in progress, is a remarkable feature in the civic history of the United States. The only restriction placed upon the organising bodies is that State governments shall be Republican in form. In most of these new States very advanced opinions prevail in regard to State Medicine. Stringent health laws are passed, and growing out of these are laws for the suppression of quackery. In this respect the new States are far in advance of the older ones, which are very slow to take this advanced step. In many of the new States there are no irregular practitioners.

New York, Aug. 8th.

THE SERVICES.

ARMY MEDICAL STAFF.—The undermentioned Surgeons to be Surgeons-Major, ranking as Major (dated Aug. 5th, 1889):—Francis Henry Swinton Murphy, M.D.; William Thomas Johnston, M.D.; Abraham Walker Browne; Robt. Doveton Hodson; Caleb K. Powell, M.D.; Hugh Cunningham Kirkpatrick, M.D.; John Armstrong; Wm. Wallace Kenny, M.B., F.R.C.S. Ireland; Philip Mackay Ellis; Patrick Joseph O'Sullivan, M.D.; and James FitzGerald Brodie, M.D.; Surgeon Phineas Barrett Tuthill, M.D., F.R.C.S. Ireland, to be Surgeon-Major, ranking as Major (dated Aug. 8th, 1889).

MILITIA (Infantry).—9th Battalion, the Rifle Brigade (the Prince Consort's Own): Surgeon-Major R. V. Kelly resigns his commission; also is permitted to retain his rank, and to wear the prescribed uniform on his retirement (dated Aug. 24th, 1889).

ADMIRALTY.—The following appointments have been made:—Surgeon William M. Lory to the *Penelope*, additional, for Ascension Hospital, and Surgeon Percy W. Bassett-Smith to the *Nankin* (both dated Aug. 28th, 1889); Fleet Surgeon George Kell to the *Wildfire*, for charge of medical duties of Sheerness yard, Naval Barracks, and ships of Steam Reserve, and Surgeon Vidal G. Thorpe to the *Belleisle* (both dated Aug. 26th, 1889).

VOLUNTEER CORPS.—*Artillery:* The Tynemouth: Acting Surgeon H. Bramwell, M.D., to be Surgeon (dated Aug. 24th, 1889).—*Engineers* (Fortress and Railway Forces): 1st West Riding of Yorkshire (Sheffield): Acting Surgeon C. H. Willey, M.D., to be Surgeon (dated Aug. 24th, 1889).—*Rifle:* 1st Volunteer Battalion, the Cheshire Regiment: Acting Surgeon A. Craigmile, M.D., to be Surgeon (dated Aug. 24th, 1889).—2nd (Berwickshire) Volunteer Battalion, the King's Own Scottish Borderers: Alfred Dorriforth Vardon, Gent., to be Acting Surgeon (dated Aug. 24th, 1889).—2nd Volunteer Battalion, the East Surrey Regiment: Acting Surgeon W. Gandy to be Surgeon (dated Aug. 24th, 1889).—*Memorandum* (Infantry Volunteer Brigade)—North Midland Brigade: Surgeon and Surgeon-Major W. Milligan, 2nd Volunteer Battalion, the Sherwood Foresters (Derbyshire Regiment) to be Brigade Surgeon, ranking as Lieutenant-Colonel (dated Aug. 24th, 1889).

THE NEW VICTORIA EYE AND EAR HOSPITAL, HEREFORD.—The ceremony of formally opening this institution was performed on the 20th inst. by Lady Bailey, the wife of the member for the city, Sir J. R. Bailey, M.P. The building is erected on the most approved sanitary plans, and contains excellent administrative accommodation, surgery, operating-rooms, &c. There are four wards, one large and one small, for each sex. For the present, the two larger wards will have four beds each and a child's cot or two, and the smaller two beds each. The cost of the hospital has been £2400, and towards the site and building fund £1610 has been subscribed or promised.

AMBULANCE WORK.—On Saturday last, at the People's Palace, Mile-end, Princess Frederica of Hanover distributed the medallions and certificates to the successful students of the St. John Ambulance Association classes in the metropolitan centre, which includes the city and Port of London and the East-end.

Medical News.

ARMY MEDICAL SERVICE.—The following is a list of the successful candidates at the recent competitive examination for commissions in the above Service:—

	Marks.		Marks.
Waller, H. J.	3085	Stone, C. A.	2800
Bewley, A. W.	3080	Way, L.	2730
Mould, W. T.	3030	Moores, S. G.	2640
Hughes, M. L.	2910	Winter, H. E.	2630

NAVAL MEDICAL SERVICE.—The following gentlemen, who competed at the examination recently held at Burlington House for appointment as Surgeon in the Royal Navy, have been successful:—

	Marks.		Marks.
G. Allan, M.B.	3100	N. C. Ridley	2920
W. J. Maillard, M.B.	3065	A. H. L. Cox	2885
P. V. Jackson	3010	E. F. S. McKay	2880
O. M. Jones	2920	A. Maclean, M.B.	2880

INDIAN MEDICAL SERVICE.—The following is a list of the candidates for the above Service who were successful at the competitive examination held at Burlington House on Aug. 12th and following days:—

	Marks.		Marks.
A. L. Duke	3400	C. L. Williams	3190
H. B. Melville	3380	C. H. Bedford	3145
J. C. S. Vaughan	3380	W. C. Vickers	3115
H. F. Cleveland	3260	J. C. White	3105
J. B. Smith	3240	E. L. C. Smith	3060
T. W. Shaw	3205	H. W. Elphick	3050

Fifty-six candidates competed for twelve appointments; fifty-five were reported qualified.

SOCIETY OF APOTHECARIES OF LONDON.—The following candidates, having passed the qualifying examination in Medicine, Surgery, and Midwifery, have received certificates entitling them to practise in the same, and were admitted Licentiates of the Society on the 16th inst.:—

Greenwood, Samuel, Queen's College, Birmingham.
Jessop, Arthur Rowland, Guy's Hospital.
Rees, Edward Davies, King's College Hospital.

Passed on the 21st inst.:—

Bate, John, London Hospital.
Blewitt, Patrick Lyons, Dublin.
Buée, Kenneth Frederick Tooke, University College Hospital.
Case, William, King's College Hospital.

Passed on the 22nd inst.:—

Ilott, Arthur Talman, Charing-cross Hospital.
Walton, John Stamford, Newcastle-on-Tyne.

RABIES.—The *London Gazette* of the 23rd inst. publishes the usual returns of the number of cases of contagious or infectious disease under the Contagious Diseases (Animals) Act in Great Britain during the week ending the 17th inst. For the first time since the enforcement of the muzzling order no cases of rabies among dogs are reported.

NEW HOSPITAL AT ALDERSHOT.—On the 26th inst., at Aldershot, Lady Wood, the wife of Sir Evelyn Wood, the lieutenant-general commanding the division, formally opened the new buildings connected with the Female and Children's Hospital, which comprise three wards, named respectively the "Stanhope," the "Connaught," and "Dorothy."

FEVER HOSPITAL, HOMERTON.—On Tuesday night, a fire broke out at the ambulance station of this hospital. The furnace-room on the ground floor of the building caught alight. The flames burnt through the roof, but, after an hour's work by the fire brigade, were subdued. The roof of the laundry became also ignited, and some damage was done to the harness store. The cause of the fire is unknown.

NORTH DEVON INFIRMARY.—Dr. R. Budd presided at the sixty-third annual meeting held at Barnstaple on the 20th inst. A letter was read from Lord Fortescue offering to pay £150 odd, the cost of some sanitary improvements in the establishment, which was accepted. The report showed a falling off in the year's receipts of £184 4*s*. A new system of ventilation and some efficient drainage works had been carried out at an outlay of £426. During the year the Convalescent Home at Morthoe had been built and endowed by Mr. W. F. Rook and his sister and patients from the Infirmary sent there. The medical report stated that 512 in-patients and 2208 out-patients were admitted during the year.

THE ROYAL COLLEGE OF SURGEONS.—The library and museum of the College will be closed during the month of September for the purposes of cleaning.

FEVER AT CAIRO.—Recent advices announce the continuance of admissions of fever cases to the hospital at Cairo. There are said to be now 300 cases under treatment in the institution.

QUARANTINE.—According to the *London Gazette* the British representative at Alexandria has telegraphed as follows:—"Lohaya to Moka, inclusive, released from quarantine." The British representative at Constantinople has telegraphed that fifteen days' quarantine has been imposed at all Turkish ports against all ports in the Persian Gulf.

STRATFORD-ON-AVON HOSPITAL.—At the annual meeting of the governors and friends of this hospital on the 26th inst. a satisfactory statement was made as regards its financial position, an increased income being shown as compared with that of last year. Moreover, a debt of £282 had been paid off. The number of in-patients during the year had been 202, and of out-patients 509.

OPHTHALMIA AT HANWELL SCHOOLS.—At a meeting this week of the Board of Managers of the Central London District (Poor-law) Schools at Hanwell a tender was accepted for the erection of temporary dwellings for the isolation of 400 ophthalmic juvenile patients, at a cost of £19,600. These schools contain upwards of 1100 children from the unions of the City of London and St. Saviour's Surrey, &c., and of this number upwards of 300 children are affected more or less severely with ophthalmia. In addition to these buildings, it has become necessary to engage a special ophthalmic surgeon and a staff of nurses. These steps are the result of strong, urgent, and long-continued representations from the Local Government Board.

PRESENTATIONS.—On Tuesday, the 27th inst., a number of friends waited on Edward Stamer O'Grady, F.R.C.S.I., at his residence, Merrion-square, Dublin, and presented him with an address accompanied by a brougham and silver-mounted harness, and a handsome bracelet for Mrs. O'Grady. The address was read by Mr. Edward Hamilton, surgeon to his Excellency the Lord-Lieutenant. Mr. O'Grady afterwards entertained those present to luncheon.—Mr. T. A. Collinson, M.R.C.S., L.S.A., having decided to leave the Durham County Hospital, the term of his office as house surgeon for the past two years having expired, the nursing staff of the institution, in recognition of their appreciation of the harmony in which they had worked together, have presented him with a writing-table set of brass ornaments.

MEDICAL NOTES IN PARLIAMENT.

Cotton Cloth Factories Bill.

IN the House of Lords on Thursday, the 22nd inst., Viscount Cross in moving the second reading of this Bill, explained that it was a sanitary measure regulating the amount of acids to be used, so as not to oppress the workpeople. The Bill had been carefully considered, and was an excellent sanitary measure. The Bill was then read a second time. It passed through Committee, with some verbal amendments, on Monday, the 26th.

The Royal Assent.

On Monday, the 26th, the Royal Assent was signified by Commission to the following, amongst other Bills:—The Lunacy Acts Amendment Bill, the Prevention of Cruelty to and Protection of Children Bill, and the Local Government (Scotland) Bill

The Cholera Prevention Bill.

The Public Health (Cholera Prevention) Bill (which passed through Committee and was read a third time in the House of Commons on Saturday, the 24th) was read a first time in the Upper House on Monday, the 26th.—In moving the second reading, on the following day (Tuesday, the 27th), Lord Balfour explained that its object was to remove doubts in regard to regulations the Local Government Board were empowered to make under the Public Health Act, which had been in force for sixteen or seventeen years. It was of great importance that those doubts should be removed.—The Bill was read a second time, and subsequently passed through its remaining stages.

Typhoid in the West-end.

In the House of Commons on Thursday, the 22nd inst., Mr. Ritchie, in reply to Mr. Isaacson, stated that he had no authority to give any

directions to the sanitary inspectors of St. George's, Hanover-square, who were in no way subject to the jurisdiction of the Local Government Board. He would, however, communicate with the Vestry of the parish with reference to the sanitary inspectors reporting upon the houses which had open cesspools, and advising as to their immediate removal.

Contagious Disease in India.

In answer to Mr. Cavendish-Bentinck, Sir J. Gorst (Under-Secretary for India) stated that the Cantonment Bill contained provisions for enabling the Government of India to deal with all contagious diseases within cantonments, and regulations for that purpose would be made by the Government of India as soon as the Bill became law.

The Royal Commission on the Blind.

In answer to Mr. Woodall, Mr. W. H. Smith stated that the important recommendations contained in the report of the Royal Commission on the Blind, the Deaf, and the Dumb, would be carefully considered during the recess.

Londonderry Prison Doctors.

On Friday, in Committee of Supply, on the vote for the General Prisons Board in Ireland, Mr. Blane said he was an inmate of Londonderry Gaol in 1888. At that time disease was prevalent. No attempt was made at isolation or at tracing the source, and destroying the cause of disease. The doctor, Sir William Miller, and the officials treated all complaints with indifference and contempt. The money voted for the medical officers of Londonderry Prison was, in the speaker's opinion, entirely thrown away. Mr. Conybeare had fallen a victim to the indifference of the doctors about separating prisoners who were suffering from disease. Prisoners were not put into hospital until they were in a dying state and past cure. The Chief Secretary had stated that the sick-rate of the prison was less than that of the town, but that was accounted for by the fact that sick prisoners were not in hospital. He had himself witnessed cases in Londonderry prisoners where warders had assaulted prisoners in order to provoke resistance, when the prisoners were summoned and sentenced to a further term of imprisonment. The Government could and ought to remedy these things.—Mr. Balfour, in reply, stated that he was accustomed and he was indifferent to attacks made upon himself by honourable members opposite; but when it came to the character of an official like the present medical officer of the Londonderry Gaol the matter became one of great importance. This doctor had been attacked for his want of humanity, especially in the case of M'Gee, who had died of acute tuberculosis. A more outrageous accusation had never been made. Sir William Miller had acted as a most humane and honourable gentleman. The medical arrangements of Londonderry Gaol were in a peculiarly satisfactory condition.—On the following day (Saturday) the subject was resumed, when Sir C. Lewis bore testimony to the high character of Sir W. Miller, the prison doctor, against whom in Derry no one could venture to say one word, such was the high esteem in which he was held by all classes. He challenged any hon. member opposite to say if that was so or not.—Mr. Leamy and Mr. T. Healy continued the attacks upon Sir W. Miller, after which Mr. Balfour again defended that medical officer against the undeserved abuse which had been heaped upon him. The privileges granted by Irish prison doctors to Crimes Act prisoners were enormously in excess of those granted to other prisoners, and the rate of mortality in English prisons was double that in Irish prisons.

The Professors of the Queen's Colleges.

On Saturday, the 24th, Mr. Pinkerton asked the Secretary to the Treasury whether, in view of the serious financial loss inflicted upon certain professors of the Queen's Colleges, by the passing of the Royal University (Ireland) Act, he was prepared to make the same concession to them as was given to medical officers and servants in the Dublin Hospital Board Bill, which he had recently introduced.—Mr. Jackson said he did not recognise any similarity in the circumstances between the two cases referred to.

Infectious Diseases Notification Bill.

The House went into Committee on this Bill. Mr. H. Stewart moved to report progress as many members were absent, and there were no medical men present. The motion was rejected after a discussion by 54 against 18. Clause 1 was agreed to, and a long discussion arose on Clause 2, which Mr. Healy moved to amend by omitting subsection A.—Mr. Ritchie explained that the Bill as it stood proposed to make the Act compulsory in London and optional throughout the country. The amendment would strike out the compulsion with reference to London. He added that the Government proposed to accept the principle of the amendment later on. The amendment was then withdrawn, and the clause agreed to, as were the clauses up to 9 inclusive. On Clause 10 Mr. Ritchie moved to add the words, "The managers shall send weekly to the London County Council such return of the infectious diseases of which they receive certificates in pursuance of this Act as the London County Council from time to time require."—The amendment was agreed to.—On the motion of Mr. Ritchie, the following new clauses were agreed to and added to the Bill:—"A payment made to any medical practitioner in pursuance of this Act shall not disqualify that practitioner for serving as member of the council of any county or borough, or as member of a sanitary authority, or as guardian of a union, or in any municipal or parochial office. Where a medical practitioner attending on a patient is himself the medical officer of health of the district, he shall be entitled to the fee to which he would be entitled if he were not such medical officer." "Where this Act is put in force in any district in which there is a local Act for the like purpose as this Act, the enactments of such local Act, so far as they relate to that purpose, shall cease to be in operation."—Some verbal alterations and modifications were made in the application of the Act to Scotland and Ireland, and the Bill as amended passed through Committee. The Bill as amended was considered and read a third time on Monday, the 26th.—The Bill was taken to the Upper House on Wednesday, the 28th inst., when Lord Balfour, in moving the second reading of this Bill, said that there were now fifty-two urban and rural authorities in whose districts the system proposed under the Bill was already enforced, and no fewer than three and a half millions of people were controlled by those authorities. Therefore the Bill could not be said in any way to introduce a novel principle. A large number of public bodies had petitioned in favour of the provisions of the Bill, and in 1887 a circular was sent to the sanitary authorities and medical officers in all the districts now under the system to which the Bill would give effect. The response to this circular was absolutely unanimous in favour of the Bill. One of the chief advantages of the notification of infectious disease was that it led to a more rapid discovery of the cause. In one town thirty cases of typhoid were notified at the same time, and the cause of the epidemic was at once traced to the milk-supply. The Bill was read a second time, and the Committee stage being dispensed with, the Bill was read a third time and passed.

Health of British Troops in India.

On Monday, the 26th, Mr. E. Stanhope, Secretary of State for War, stated that the ratio of admissions for venereal disease among British troops in India during the first four months of 1888 was 349 per 1000. Sir J. Gorst added that no report was made up with regard to native troops.

Health of Dublin Barracks.

General Fraser asked whether it was true that between the first week of July and the present date the number of cases of enteric fever in the Dublin Barracks had increased 300 per cent. Mr. E. Stanhope, in reply, stated that up to the end of June in the present year the number of cases had fallen far below the number last year, but he regretted to say that there had been a fresh outbreak in July. The works of improvement were being actively carried on, as well as the subsoil drainage which had been recommended. Much had already been done, although, owing to the state of the river, he despaired of eradicating enteric fever altogether at present.

The Fountains in Trafalgar Square.

In reply to Mr. Kimber, Sir H. Maxwell (Lord of the Treasury) denied that the water supplied to the fountains in Trafalgar-squace was generally in a foul condition. The water is ordinarily supplied from the artesian well at the back of the National Gallery, and from repeated analyses has been found to be of excellent quality.

Dublin Hospital Board Bill.

On the order to go into Committee on this Bill, Mr. Jackson (Secretary to the Treasury) moved that the order be discharged and the Bill withdrawn, adding the hope that it might be passed next session. The motion was agreed to.

Movable Dwellings Bill.

On Tuesday, the 27th inst., the orders for the consideration, as amended, of this Bill were read and discharged, and the Bill was withdrawn.

METROPOLITAN ASYLUMS BOARD.

Return of Patients remaining in the several Fever Hospitals of the Board at midnight on August 27th, 1889.

Hospital.	Beds occupied.						Total accommodation.
	Scarlet fever.	Diphtheria.	Typhus fever.	Enteric fever	Other diseases.	Total.	
Eastern Hospital	233	57	..	36	5	331	400
North-Western Hospital	185	22	..	4	..	211	435
Western "	176	7	..	8	..	191	262
South-Western "	..	..	..	..	..	..	402
South-Eastern "	278	14	..	16	1	309	462
Northern "	..	..	..	..	..	..	480
Totals	872	100	..	64	6	1042	2441

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column are invited to forward it to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.*

ABBOTT, F. C., L.R.C.P., M.R.C.S., has been appointed Resident House Physician to St. Thomas's Hospital.

ANDERSON, G. R., L.R.C.P., M.R.C.S., has been appointed Resident Accoucheur to St. Thomas's Hospital.

ANSON, G. E., M.A., M.B., B.C. Cantab., L.R.C.P., M.R.C.S., has been appointed Assistant House Surgeon to St. Thomas's Hospital.

BOYCOTT, A. N., L.R.C.P., M.R.C.S., has been appointed House Surgeon to St. Thomas's Hospital.

COWEN, T. P., L.R.C.P., M.R.C.S., has been reappointed Resident House Physician to St. Thomas's Hospital.

CROOKE, G. F., M.D. Edin., M.R.C.S., has been appointed Physician for Out-patients to the Queen's Hospital, Birmingham, vice Dr. Hogben, resigned.

GERVIS, H., M.A., M.B., B.C. Cantab., L.R.C.P., M.R.C.S., has been appointed Assistant House Surgeon to St. Thomas's Hospital.

GUILDING, L. M., M.A. Oxon., M.R.C.S., L.S.A., has been appointed Assistant Surgeon to the Royal Berkshire Hospital.

HULBERT, H. H., L.R.C.P., M.R.C.S., has been appointed House Surgeon to St. Thomas's Hospital.

JERSEY, W. B. DE, L.R.C.P., M.R.C.S., has been appointed Assistant House Physician to St. Thomas's Hospital.

LAKE, R., L.R.C.P., M.R.C.S., L.S.A., has been appointed Clinical Assistant for Diseases of the Ear to St. Thomas's Hospital.

LAMBERT, T. W., L.R.C.P., M.R.C.S., has been appointed Clinical Assistant for Diseases of the Skin to St. Thomas's Hospital.

MANNERS, W. F., M.R.C.S., L.S.A., has been reappointed Clinical Assistant for Diseases of the Throat to St. Thomas's Hospital.

MILTON, F. R. S., L.R.C.P., M.R.C.S., has been appointed House Surgeon to St. Thomas's Hospital.

MORRICE, G. G., M.A., M.B. Cantab., has been appointed Resident Medical Officer to the Metropolitan Asylums Board Hospital, Homerton.

SCOTT, D. W., L.R.C.P., L.R.C.S. Edin., has been appointed Medical Officer, Borough of Flint, vice Hughes, resigned.

SPENCER, M. H., M.A., M.B., B.C. Cantab., L.R.C.P., M.R.C.S., has been appointed Non-resident House Physician to St. Thomas's Hospital.

THOMSON, ANDREW, M.B. & C.M. Edin., has been appointed Medical Officer of the Crriggletone District, Wakefield Union.

TUNSTALL, J. O., M.B. Lond., M.R.C.S., has been appointed Senior Resident Assistant Medical Officer at the Workhouse, Birmingham.

TURNEY, H. G., M.A., M.B., B.Ch. Oxon., L.R.C.P., M.R.C.S., has been appointed House Surgeon to St. Thomas's Hospital.

WALTERS, J. H., M.R.C.S., L.S.A., has been appointed Surgeon to the Royal Berks Hospital.

WOODWARD, WILLIAM, L.R.C.P. Lond., M.R.C.S., has been appointed Junior Assistant Medical Officer to the County Asylum, Bodmin.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement.

BOROUGH HOSPITAL, Birkenhead.—Junior House Surgeon. Salary £60, with board, lodging, and washing, also fees for notifying infectious cases. No wine or beer.

CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST, Victoria-park, E.—House Physician for six months. No salary, but board and residence provided.

COUNTY ASYLUM, Shrewsbury.—Junior Assistant Medical Officer. Salary £100 per annum, and £8 in lieu of beer, with board, lodging, and washing.

GLASGOW ROYAL INFIRMARY AND ST. MUNGO'S COLLEGE, Glasgow.—Curator of the Museum and Pathologist. Salary £50 per annum.

MACCLESFIELD ROYAL INFIRMARY.—Senior House Surgeon. Salary £100 for the first year, with an increase of £10 the second year, with board and residence.

MANCHESTER ROYAL INFIRMARY, DISPENSARY, AND LUNATIC HOSPITAL OR ASYLUM.—Honorary Assistant Surgeon.

NORTH LONDON CONSUMPTION HOSPITAL, Hampstead, N.W.—Resident Medical Officer. Honorarium £40 a year, with board, rooms, &c.

POPLAR HOSPITAL FOR ACCIDENTS, E.—Resident Assistant and House Surgeon. Salary £50 per annum.

ROTHERHAM HOSPITAL.—Assistant House Surgeon. In lieu of salary, rooms, commons, and washing provided in the hospital.

ROYAL ALBERT HOSPITAL, Devonport.—Resident Medical Officer. Salary £150 per annum, with board and lodging.

STAMFORD, RUTLAND, AND GENERAL INFIRMARY.—House Surgeon and Secretary. Salary £100 a year, with board, lodging, and washing.

UNIVERSITY OF ABERDEEN.—Six persons to be Examiners for Graduation in Medicine. Each will receive a grant of £30.

WOLVERHAMPTON AND STAFFORDSHIRE GENERAL HOSPITAL, Wolverhampton.—House Physician (who will also be required to act as Chloroformist, Pathologist, and Medical Registrar). Salary £100 per annum, with board, lodging, and washing.

Births, Marriages, and Deaths.

BIRTHS.

BAMBER.—On July 29th, at Moultan, Punjab, India, the wife of Surgeon C. J. Bamber, of twins (sons).

CHRISTISON.—On Aug. 20th, at Whyte Knowe, Peebles, the wife of David Christison, M.D., of a son.

COMBE.—On Aug. 23rd, at Holly House, North Walsham, the wife of F. Orloff Combe, M.D., of a daughter.

GIMLETTE.—On Aug. 5th, at Ireland Island, Bermuda, the wife of Staff-Surgeon T. D. Gimlette, R.N., of a son.

JEWSON.—On Aug. 23rd, at Strathleven-road, Acre-lane, Brixton, S.W., the wife of Francis A. B. Jewson, F.I.C., F.C.S., of a son.

LAMB.—On Aug. 20th, at Moira House, Arnold, Notts, the wife of William Lamb, M.D., of a son.

WILKINS.—On Aug. 19th, at 1, Windsor-road, Ealing, W., the wife of H. G. G. Wilkins, L.R.C.P. Lond., M.R.C.S., of a daughter.

MARRIAGES.

BRAIDWOOD—CUNNINGTON.—On Aug. 21st, at St. John's Church, Devizes, P. Murray Braidwood, M.D., F.R.C.S., F.R.M.S., of Shirehampton (late of Birkenhead), to Lydia Mary, eldest daughter of the late Henry Cunnington, of Southgate House, Devizes.

HARRISON—ALLISON.—On Aug. 22nd, at St. Andrew's, Collumpton, Devon, by the Rev. Prebendary J. G. Davis, M.A., Edward Harrison, M.A., M.B. Cantab., F.R.C.S., of Hull, to Mary Jane Allison, widow of the late James Allison, R.N.

LEWIS—WASSELL.—On Aug. 22nd, at Zion Baptist Chapel, Bradford-on-Avon, B. Morgan Lewis, M.R.C.S., L.R.C.P. Lond., son of Benjamin Lewis, Abergavenny, to Marian, daughter of the late Rev. David Wassell, of Bradford-on-Avon and Bath.

MARTIN—HAMOND.—On Aug. 22nd, at the Roman Catholic Church, Spanish-place, Surgeon-Major P. R. Martin, eldest son of the late Richard Martin, Esq., Cro'cloney, Ireland, to Esabella Mary, only child of the late Lieut. William Carr Hamond, Royal Engineers.

MORGAN—EDYVEAN.—On Aug. 13th, at the Parish Church, Bodmin, William Lewis Morgan, M.A., of Exeter College, Oxon., M.R.C.S., to Lucinda Mary, daughter of the late Major Edyvean, of Windsor House, Bodmin.

SMITH—NICHOLLS.—On Aug. 17th, at St. Stephen's, Coleman-street, E.C., by the Rev. M. Lambrick, Fredk. J. Smith, M.B., M.R.C.P., F.R.C.S., of West-street, Finsbury-circus, to Janet May (Sister Talbot), widow of the late George Henry Nicholls.

DEATHS.

HABERSHON.—On Aug. 22nd, at Brook-street, Grosvenor-square, W., Samuel Osborne Habershon, M.D., F.R.C.P., aged 64.

JOBSON.—On Aug. 23rd, at Bishop Auckland, John Jobson, F.R.C.S. Eng., J.P., county Dublin, aged 79.

MILLER.—On Aug. 27th, at Ettrick Tower, Merchiston, Edinburgh, after a week's illness, William Cornfoot Strettell Miller, M.D. Edin.

TOMKINS.—On Aug. 22nd, at Norwood House, Whiteladies-road, Clifton, Bristol, Charles Joseph Tomkins, M.R.C.S., L.S.A., eldest son of the late Charles Tomkins, M.D., of Abingdon, Berks, after six years' paralysis, aged 67.

WYLLIE.—On Aug. 24th, at Homburg, Surgeon-General David Wyllie, of the Bombay Army, aged 69.

N.B.—A fee of 5s. is charged for the Insertion of Notices of Births, Marriages, and Deaths.

BOOKS ETC. RECEIVED.

ALLEN, W. H., & Co., Waterloo-place, London, S.W.

The Diseases and Disorders of the Ox. With some Account of the Diseases of the Sheep. By George Gresswell. With additions on Human and Comparative Pathology, by Dr. Albert Gresswell. 1889. pp. 755.

BAILLIÈRE, TINDALL, & COX, King William-street, Strand, London.

Cancer and its Complications. By C. E. Jennings, F.R.C.S. 1889. pp. 154.

Dermoids; or, Tumours containing Skin, Hair, Teeth, &c. By J. B. Sutton, F.R.C.S. 1889. pp. 131.

Anæsthetics, Ancient and Modern; their Physiological Action, Therapeutic Use, and Mode of Administration. By Geo. Foy, F.R.C.S. 1889. pp. 175.

BLAKISTON, SON, & Co., Philadelphia.

Transactions of the American Surgical Association. Vol. VII. Edited by J. Ewing Mears, M.D. 1889. pp. 225.

CHURCHILL, J. & A., New Burlington-street, London, W.

Outlines of the Clinical Chemistry of Urine. By C. A. Mac Munn, M.A., M.D. Dub. With 64 Woodcuts and Plate of Spectra. 1889. pp. 254.

The Goulstonian Lectures on Secondary Degenerations of the Spinal Cord. Delivered at the Royal College of Physicians, March, 1889. By Howard H. Tooth, M.D., F.R.C.P. 1889. pp. 71.

A Guide to the Alterations in the British Pharmacopœia (1885), comprising an Epitome of the Changes, and an account of the New Preparations, &c. By Prosser James, M.D. Third Edition. 1889. pp. 119.

FUNK & WAGNALLS, 44, Fleet-street, London.

Emergency Notes. What to Do in Accidents and Sudden Illness until the Doctor comes. By G. R. Butler, A.M., M.D. With 18 original Illustrations. 1889. pp. 102.

HENDERSON, JOHN, & Co., Kingston, Ontario.

Manual of Obstetrics, Gynæcology, and Pediatrics. By Kenneth N. Fenwick, M.A., M.D. 1889. pp. 251.

HEYWOOD, JOHN, Paternoster-buildings, London.

Buxton: its Baths and Climate; comprising a full account of the celebrated waters and climate of Buxton, and a description of "The Buxton Thermal Cure." By Samuel Hyde, L.R.C.P., M.R.C.S. 1889. pp. 134.

HODDER & STOUGHTON, Paternoster-row, London, E.C.

Captain Lobe: A Story of the Salvation Army. By John Law 1889. pp. 281. Price 3s. 6d.

LEWIS, H. K., Gower-street, London, W.C.

Hygiene of the Nursery: Including the General Regimen and Feeding of Infants and Children, and the Domestic Management of the Ordinary Emergencies of Early Life. By L. Starr, M.D. Second Edition, with 25 Illustrations. 1889. pp. 280.

Gout and its relations to Diseases of the Liver and Kidneys. By Robson Roose, M.D., LL.D., F.C.S. Sixth Edition. 1889. pp. 179.

On the Physiology of the Vascular System. Three Lectures delivered at the Royal College of Surgeons. By Mark P. M. Collier, M.B., M.S. Lond., F.R.C.S. 1889. pp. 53.

A Practical Treatise on Materia Medica and Therapeutics. By Roberts Bartholow, M.A., M.D., LL.D. Seventh Edition, revised and enlarged. 1889. pp. 802.

Gynæcological Electro-Therapeutics. By Horatio R. Bigelow, M.D. With an introduction by Dr. Georges Apostoli. With Illustrations. 1889. pp. 199.

LIVINGSTONE, E. & S., Teviot-place, Edinburgh.

Applied Anatomy: Surgical, Medical, and Operative. By J. M'Lachlan, M.D., B.Sc., M.R.C.S. Vols. I. and II. Illustrated. Third Edition. 1889. pp. 584 each volume.

MACMILLAN & CO., London.

A Treatise on Chemistry. By Sir H. E. Roscoe, F.R.S., and C. Schorlemmer, F.R.S. Vol. III.: The Chemistry of the Hydrocarbons and their Derivatives, or Organic Chemistry. Part 5. 1889. pp. 523.

STANFORD, EDWD., Cockspur-street, Charing-cross, London.

Algerian Hints for Tourists. By C. E. Flower. 1889. pp. 60.

Die Heilung der Schwindsucht auf diätetischem Wege; von Dr. Med. Alanus, prakt. Arzt. (Von Max Breitkreuz, 1889, Berlin).—Leprosy: a Communicable Disease; by C. N. Macnamara, second edition (J. & A. Churchill, London, 1889).—Recollections of a Nurse; by E. D. (Macmillan & Co., London, 1889).—Exposé du Traitement de l'Entorse au moyen du Massage; par le Dr. Gustave Delaunois, à Peruwelz (Henri Lamertin, Bruxelles, 1889).—American Working Men's Expedition: The Scripps League (John F. Eby & Co., Detroit, 1889).—Spinoza, the God-intoxicated Man; a short Account of his Life and Philosophy; by W. J. Collins, B.Sc. (Meyers, Brooks, & Co., Enfield, 1889).—Étude critique du Traitement des Salpingites et en particulier du Curettage de l'Utérus dans la Salpingite catarrhale; par Alexandre Rizkallah (Henri Jouve, Paris, 1889).—De la Diminution de l'Urée dans le Cancer: Valeur Séméiologique; Applications spéciales au Cancer de l'Estomac et aux Tumeurs Abdominales; par le Dr. G. Rauzier (G. Masson, Paris, 1889).—"Timehri," being the Journal of the Royal Agricultural and Commercial Society of British Guiana; edited by J. J. Quelch, B.Sc., C.M.Z.S. Lond. Vol. III., New Series, Part 1, June, 1889 (E. Stanford, London).—Manual of Swedish Drill, for Teachers and Students, compiled by George L. Mélio; with 110 illustrations and diagrams (Sampson Low, Marston, Searle, and Rivington, London, 1889), price 1s. 6d.—A Manual of Home Nursing, by Louisa Emily Dobrée (Swan Sonnenschein & Co., London, 1889).—Clinique de Psycho-Thérapie suggestive: fondée à Amsterdam le 16 Août, 1887, et dirigée par les Docteurs A. W. van Renterghem et F. van Eeden. Compte Rendu des Résultats obtenus pendant la première période bisannuelle 1887—1889; lu au Congrès International de l'Hypnotisme Expérimental et Thérapeutique réuni à Paris du 8 au 12 Août, 1889 (A. Manceaux, Bruxelles, 1889).—Diary for 1889: Sanitary Record, and London Medical Record (W. H. Allen & Co., London).—A Demonstration of Centres of Ideation in the Brain from Observation and Experiment; by Bernard Hollander (Harrison and Sons, London, 1889).—Yellow Fever: a new Treatment. A Forecast for 1889; Panama, Colon, and Havana, its Hotbeds and Distributers (New York, 1889).—Modern Cremation; par le Dr. Prosper de Pietra Santa (Bureau de la Société Française d'Hygiène, Paris, 1889).—The Early Diagnosis of Malignant Growths; by J. Collins Warren, M.D., Boston.—The Sturtevant System of Heating, Ventilating, and Moistening Textile Manufactories; by E. N. Foss, General Manager, B. F. Sturtevant Blower Works, Boston, Mass. (Sturtevant Blower Company, London).—List of Specialities and recently introduced Remedies; August, 1889, sixth edition, revised (J. Woolley, Sons, & Co., manufacturing pharmaceutical chemists, Manchester).—Index-Medicus: Authors and Subjects, Vol. XI., No. 7, July, 1889 (Trübner & Co., and Lewis, London).—Traitement par l'Electricité et le Massage; par le Docteur A. S. Weber (Alex. Coccox, Paris, 1889).—The Asclepiad, third quarter, 1889; No. 23, Vol. VI.; by B. W. Richardson, M.D., F.R.S. (Longmans, Green, & Co., London), price 2s. 6d.—Medical Guide to the Mineral Waters of Royat (Auvergne); by Dr. C. A. Pettit (Henry Renshaw, London, 1889).—The Animal Alkaloids, Cadaveric and Vital; or the Ptomaines and Leucomaines Chemically, Physiologically, and Pathologically considered in relation to Scientific Medicine; by A. M. Brown, M.D., with an Introduction by Professor A. Gautier (Hirschfeld Brothers, London, 1889), second edition, price 7s. 6d.—Magazines for September: Leisure Hour, Good Words, Sunday at Home, Boy's Own Paper, Sunday Magazine (Isbister), Girl's Own Paper, Blackwood's Edinburgh Magazine, Wit and Wisdom, Scribner's.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, August 29th, 1889.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb.	Wet Bulb.	Solar Radia in Vacuo.	Maximum Temp. Shade.	Min. Temp	Rainfall.	Remarks at 8.30 A.M.
Aug. 23	29·97	N.W.	57	52	103	67	52	·04	Bright
,, 24	29·86	W.	55	54	95	67	53	·04	Raining
,, 25	29·90	N.W.	56	52	105	67	47	·60	Cloudy
,, 26	30·05	N.W.	57	53	95	63	52	..	Cloudy
,, 27	30·25	W.	57	52	109	70	47	..	Bright
,, 28	30·23	W.	61	56	114	73	54	..	Cloudy
,, 29	30·23	W.	60	57	114	76	53	..	Hazy

Notes, Short Comments, & Answers to Correspondents.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

All communications relating to the editorial business of the journal must be addressed "To the Editors."

Lectures, original articles, and reports should be written on one side only of the paper.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed to the Sub-Editor.

Letters relating to the publication, sale, and advertising departments of THE LANCET *to be addressed "to the Publisher."*

We cannot undertake to return MSS. not used.

THE STUDENTS' NUMBER OF "THE LANCET" will be published on Saturday next, Sept. 7th. Those gentlemen holding official situations connected with medical institutions in the United Kingdom who have not yet forwarded the necessary information to our Office for publication in that number are earnestly requested to send it *without the delay of a single post.*

"FALLING FROM A HEIGHT."

ON this subject a correspondent writes to us as follows:—

"With reference to your annotation in THE LANCET of Aug. 24th, on the subject of falling from a height, you say the 'feelings of any who have made such perilous journeys will probably long remain matter of conjecture.' I beg to inform you before studying for the medical profession I was a sailor for some years, and on one occasion, when I was about seventeen years of age, I fell from the topgallant yard of an East Indiaman, a height, I should imagine, of at least 120 ft. During my transit through the air sensation was entirely lost; it slightly returned on striking the water, but by the time I rose to the surface I was able to strike out (being a good swimmer) and seize the life-buoy which was thrown me. I believe, had I struck a hard substance, death would have been painless; but the assertion that people die in the act of falling is evidently wrong. During my time at sea I witnessed two deaths by falling from aloft; in one case the man struck the rigging, bounded into the sea, and never again rose to the surface; in the other case the man fell on the deck, death being apparently instantaneous."

W. B. H.—"Alcohol is the devil in solution," the phrase of Dr. B. W. Richardson in a memorable exposition of the evils of excessive drinking, seems to have been anticipated by poor Alfred de Musset when he inscribed on his bottle of absinthe the line from Dante's "Inferno," "Per me si va nella città dolente" ("Through me the path into the city of woe.")

VOLUNTEER MEDICAL SERVICE.

To the Editors of THE LANCET.

SIRS,—Could any of your readers who have recently passed the proficiency examination for acting surgeons of the Volunteer force give me information as to the extent of the examination, and advise as to the best books to study?—I am, Sirs, yours faithfully,

August, 1889. ACTING SURGEON.

MALCOLM MORRIS INDEMNITY FUND.

THE following additional subscriptions to the above fund have been received:—Mr. Marcus Allen (Brighton), £1 1s.; Mr. Lovell (Deal), £1 1s.

"HEIL DIR, CARL THEODOR!"

UNDER this title ("Hail to thee, Charles Theodore!") we give a translation of the verses in which the eminent man of letters and poet, Oscar von Redwitz, congratulates His Royal Highness on the "fiftieth anniversary of his birthday." The "Duke-Doctor's" philanthropic work as an oculist and general consultant among the poor of the Bavarian and Austrian Tyrol we have already noticed, and von Redwitz's ode gives poetic form to the felicitations embodied by the peasantry of that lovely lake and hill country in bonfires and "feasts of lanterns." The translation reproduces the sense of the original as closely as a strict adherence to its double rhymes and metrical movement admits of:—

Five decades now have drifted
Since first beheld the light
A babe divinely-gifted,
To prove a "saviour knight."
How wise the life-revealer,
Who then and there could see
Bud forth the future healer
From that old warrior-tree!

Let courtier gossips prattle
Of some barbaric king,
Who from the field of battle
Could wreaths of laurel bring:
Far grander his achievement
Who toils among the poor;
The blind of their bereavement
With patient skill to cure.

Not his the work half-hearted
To while dull hours away;
On nobler errand started
He journeys through the day.
But first at matin service
He kneels in prayer, to ask
For grace of God to nerve his
Good genius to its task.

O all ye eyes, with lustre
And light by him endued,
Around, in starry muster,
Beam forth your gratitude!
All ye, who from his healing
Live longer, happier days,
Unite, with organ pealing,
Your voices in his praise!

"Heil dir!" from Tyrol's *chalet*
Floats down in choral chime;
"Heil dir!" from Tegern's valley
Beat all her waves in time.
And be your plaudits doubled
For her, his consort leal,
To whom the sick, the troubled,
Make never vain appeal.

While through the years ensuing
Thy name will be a word
For tender duty doing,
For light of life conferred;
If fulsome praise thou spurnest
As counterfeited ore,
Yet take, for once, this earnest
"Heil dir, Carl Theodor!"

"BITTEN BY A HYDROPHOBIC PATIENT."

To the Editors of THE LANCET.

SIRS,—In your issue of the 17th inst. is a small note, on page 348, with the above heading. The statements therein contained, that "the patient bit through the hand of the surgeon attending him so severely," &c., being quite unfounded, I hasten to state the simple facts of the case as follows:—A soldier suffering from hydrophobia was sent to the military hospital here, and the medical man in attendance on him injected subcutaneously some morphia with a Pravaz syringe. Upon his withdrawing the syringe he pricked himself with the needle, the point only raising the scarf skin. The surgeon went to the institute at Bucharest. He has since returned, and seems to have suffered more from the cauterisation &c. under which he went than from anything else. He is certainly now in the best of health and spirits. The soldier died after several days' severe suffering.—Yours faithfully,

A. IRWIN BOLTON, M.B., A.B.

Roumania, Kustendjie, Aug. 22nd, 1889.

To the Editors of THE LANCET.

SIRS,—In this week's LANCET there is an account of a doctor bitten by a hydrophobic patient, whose case is being watched with interest. I beg to state that while acting as clinical clerk for Dr. Langdon Down at the London Hospital, I, with Mr. Havens, the house-physician, had a severe struggle with a patient suffering from hydrophobia who died next day, in the course of which I was severely bitten in the thumb and through the palm of the hand. I went about in considerable dread until I learnt from Trousseau (*vide* Clinical Lectures, Sydenham Society) that hydrophobia was not communicable from man to man. What M. Pasteur has to say to this remark of Trousseau I do not know, but I am sure Trousseau would not have made the statement without good grounds. There is in the same paper an account of a man who died from hydrophobia without any bite. This is now the third well-authenticated case. One previously having occurred in Paris, one in the village of Putney, where it was seen by a number of medical men, all of whom had previous experience. I assisted at the post-mortem, and had previously seen three post-mortems of individuals dying from hydrophobia with similar appearances. In this case, an elderly woman who had not left her house for some long time, had an old dog with very foul teeth, which fed off the same plate; this dog was subsequently preserved until it died of a natural death some time after its mistress's decease from hydrophobia. These cases tally with a certain outbreak among an isolated herd of deer in Richmond Park, and all point to the possibility of a spontaneous or idiopathic form of hydrophobia, although it appears difficult to reconcile this with M. Pasteur's ideas on the subject; but facts are facts, and no doubt as further attention is paid to the subject more cases of spontaneous hydrophobia will be observed. For the present there have been at least three well-authenticated cases. I am, Sirs, yours faithfully,

Point House, Putney, S.W. ED. F. GRÜN, M.R.C.S., L.R.C.P.

TETANUS AFTER PARTURITION.

Dr. Benington, of Newcastle-upon-Tyne, asks to be allowed to refer Mr. Peacock and Mr. Cochrane, and others who may be interested in the above subject, to a paper written by him and published in the first volume of the Transactions of the British Gynæcological Society, 1885.

KERATOSIS.

G. B. W.—The disease is a rare one, and figures rather in treatises on teratology than in ordinary text-books. A remarkable case is that described by Joseph Hansard in his "History of the County and City of Waterford" (Dungarvan: 1870). Anne Jackson was born in Waterford city, of English parents, both of whom were sound in constitution and healthy. At three years of age horns began to grow on several parts of her body, till when about thirteen, her whole integument became so indurated that she could hardly move, and she was so stunted that five-year-old children were taller. On her knees and elbows and round the other joints horns projected—one on her arm being about four inches long and half an inch broad. She ate and drank heartily, slept well, and performed nature's offices like all healthy people. An analogous case of hypertrophy of the osseous tissue is recorded in Sir R. Christison's Memoirs, vol. i. It was operated on, but without success, by the great French surgeon Roux.

A Medical Student.—The plan of going to a colony without having obtained a qualification in the hope of getting a licence to practise is not at all a desirable one, and in Australia our correspondent would probably meet with disappointment. Many colonial universities might recognise his curriculum, but not the anatomical examination of one of the Irish colleges. The University of Otago would recognise the earlier M.B. examinations of Trinity College, Dublin, or the primary Fellowship of the English College of Surgeons. In New Brunswick and Nova Scotia an unqualified man can pass a qualifying examination, and in some portions of British territory—India, for example—any person may practise. In some of the Australian colonies there are numbers of unqualified men practising, but they are in much the same position as bonesetters are in this country.

Mr. Haynes Cory.—A notice of the instrument will appear shortly. Its merits are under observation.

Dr. McNeill (Lincoln).—We shall be pleased to receive the paper.

THE CÆSAREAN SECTION.

R. H. S.—Long before the historical advent of the Julian *gens*, the excision of the full-grown child from the gravid uterus was practised. Virgil (Æneid, X., 315), in describing the battle between the Latins and Trojans, says of Æneas: "Then he wounds Lichas, who had been cut out of the womb of his already dead mother, and was sacred to thee, Apollo." On this passage the commentator Servius writes: "All who are born by section of their mothers' womb are consecrated to Apollo as being the god of Medicine, through whom they are vouchsafed the light. In this way also Æsculapius was born. The family of the Cæsars, moreover, held in their keeping the sacred rites of Apollo, for the reason that the first of that family was brought forth by excision from the womb." See Dübner's edition of Virgil (Didot: Paris, 1858).

THE JONES FUND.

THE following additional sums have been received for the appeal made in our issue of July 20th to raise a sum to meet the legal expenses (over £60) of Mr. Jones of Edmonton:—Sums already acknowledged, £24 15*s.* 6*d.*; F. de Havilland Hall, M.D., £1 1*s.*; G. Henty, M.D., 10*s.* 6*d.*; W. H. Plaister, Esq., 10*s.* 6*d.* Further subscriptions will be gladly received by Dr. J. W. Hunt, 101, Queen's-road, Dalston, N.E. The list will close next week.

Astonished.—The action of Dr. B—— does not seem to show that dignified independence which is always desirable when a patient wishes to change his medical adviser. Some allowance may perhaps be made for feelings based on generations of professional attendance and possibly a conviction that the dismissal was not justified by any fault of which Dr. B—— was conscious.

Dr. Belcher (West Brighton).—The account, though interesting, lacks direct medical authentication, and is devoid of the details necessary to render it useful to professional readers.

COMMUNICATIONS not noticed in our present number will receive attention in our next.

COMMUNICATIONS, LETTERS, &c., have been received from—Dr. W. T. Gairdner, Glasgow; Dr. S. H. Habershon, London; Dr. A. E. Garrod, London; Mr. T. Bond, London; Dr. T. Acland, London; Mr. Mayo Collier, London; Dr. Maguire, London; Dr. S. Di-Giorgi, Mazzara del Vallo; Dr. de H. Hall, London; Mr. A. N. Lawrence; Dr. King Irwin, Dublin; Dr. Thomas Harris, Manchester; Dr. Norman Moore; Mr. Raywood, Cardiff; Mr. B. Thornton, Margate; Sir J. Crichton Browne, Dumfries; Mr. B. Waugh, London; Messrs. Wilkinson and Co., Newcastle-on-Tyne; Dr. F. M. Pope, Leicester; Messrs. Irvine and Co., London; Dr. White, Brentwood; Messrs. Hopkinson and Co., Notts; Dr. H. Belcher; Mr. Paterson, Dundee; Messrs. Lee and Martin, Birmingham; Dr. Bell Taylor, Nottingham; Mr. Harrison Cripps, London; Dr. W. W. Jones, Llanfairfechan; Messrs. Rankin and Borland, Kilmarnock; Mr. Willmore, London; Messrs. Godfrey and Cooke, London; Mr. Bolton, Roumania; Messrs. Thompson and

Co., London; Mr. Cleland, Belfast; Mr. Paton, London; Mr. Nelson Hardy, Dulwich; Mr. Eaton, Birmingham; Mr. T. Laffan; Dr. James Little, Maryport; Mr. Branson, Tungamah; Messrs. Oetling and Co., Manchester; Dr. F. P. Atkinson, Surbiton; Messrs. Hirschfeld Bros., London; Mr. C. S. Jeaffreson, Newcastle-on-Tyne; Mr. Lawson Tait, Birmingham; Dr. A. J. Richardson, Hove; Messrs. Evans and Co., Liverpool; Dr. J. A. Thompson, Sydney; Messrs. Hunter and Gordon, Aberdeen; Mr. W. H. B. Brook, Lincoln; Dr. Smith, Herne Hill; Miss Keightley, Ascot; Mr. Gowan, London; Messrs. Bates and Co., London; Mr. McKinney, Nunhead; Mr. W. E. Hall; Dr. T. Savill, London; Dr. Allwright, Brighton; Dr. Bronner, Bradford; Mr. Dowie, Edinburgh; Mrs. R. Murray, Dublin; Dr. J. W. Hunt, Dalston; Mr. Horsfall, Leeds; Mr. Ainley, Halifax; Mr. Arrowsmith, Bristol; Mr. W. B. Simpson, Darlington; Dr. Brown, Westgate-on-Sea; Dr. O'Neill, Lincoln; Dr. Dupin, Toulouse; Messrs. Zimmermann, London; Dr. Browne, London; Dr. Humphreys, Portsmouth; Dr. Taylor, Norwich; Mr. Dallas, London; Mr. Lamond, Glasgow; Messrs. Johnston, Edinburgh; Mr. Shapcote, Devonport; Mr. Pentland, Edinburgh; Mr. J. B. Browne, London; Mr. Wens, Great Portland-street; Mr. Lacey, Portsmouth; Dr. Savile, Paddington; Mr. Essex, Pontypool; Dr. Needham, Gloucester; Dr. Bate, Kew; Mr. Pensloin, Birmingham; Mr. Jackson, Sheffield; Mr. Moross, London; Dr. Bell, Scatwell; Dr. Milne, London; Mr. Crassweller, Highbury; Messrs. Clay and Son, London; Mr. Hornibrook, London; Z. Y. X., London; A Medical Student; C. F. H.; The Director-General of the Army Medical Department; A. G. D.; The Director-General of the Navy Medical Department; A Subscriber; C. T. Q.; H. C. F.; Acting Surgeon; M. F., London; G. H. B., Carlisle; St. Patrick's Bitters Co., Liverpool; L. S., London; Dorset, London; L.S.A., London; An Enquirer; Examiner, London; T., London; Secretary, Shrewsbury County Asylum; Registrar, Yorks. Coll.; Secretary, Macclesfield Infirmary; M.D., Birmingham; M. B. B.; Secretary, Manchester Royal Infirmary; M. D. B., London; Holyrood, London; X. Y. Z., London; Matron, Bournemouth; Barbarosse, London; Indicus.

LETTERS, *each with enclosure*, are also acknowledged from—Dr. Tyte, Minchinhampton; Dr. Crutchley, Stoke-on-Trent; Dr. Pollard, North Devon; Dr. Wright, Halifax; Mr. Jones, Cardiff; Messrs. Duncan and Co., Edinburgh; Mr. Burgess, Manchester; Messrs. Griffiths and Millington, Worcester; Dr. Hitchman, Fairfield; Messrs. Burgoyne and Co., London; Mr. De St. Dalmas, Leicester; Mr. Nicholls, Bury St. Edmunds; Mr. Delaney, Burton-on-Trent; Mr. Clements, North Walsham; Mr. Gray, Bristol; Mr. Petter, Yeovil; Messrs. Rodgers and Co., London; Dr. Magauran, Southampton; Mr. Lawrence, Bury St. Edmunds; Mr. Anderson, London; Mr. Chorlton, Guisborough; Mr. Elliott, Galashiels; Mr. Beck, Leamington; Messrs. Rodgers and Co., Sheffield; Mr. Thornton, Birmingham; Messrs. Wright and Co., London; Miss Williams, Leamington; Mr. Purnand, Woolwich; Mr. Forsyth, Glasgow; Dr. Wood, Pontypool; Mr. Kennedy, Port William; Dr. Pavy, London; Dr. Riordan, Cork; Mr. Hall, Salford Union; Dr. Duncan, Glasgow; Mr. Annus, Leicester; Dr. Johnson, Skipton; Mr. Bagshaw, Salford; Mr. Grace, Bristol; Mr. Heywood, Manchester; Mr. Niven, Oldham; Mr. Cole, Hartland; Dr. Wood, Monmouth; Mr. Jackson, Bradford; Major Pead, Dulwich; Mr. Ford, Sittingford; Messrs. Ingram and Royle, London; Mr. Weary, Ryde, Isle of Wight; Dr. Wilkins, Ealing; Mr. Cannock, Derby; Dr. Bower, Bedford; Mr. McConaghy, Ireland; Mr. Williams, Aberystwyth; Mr. Jones, Rotherham; Mr. Palethorpe, Dudley; Mr. Ross, Glasgow; Dr. Currie, Acklington; Mr. Watson, Woolwich; Dr. Beale, Tiverton; Mr. Penivill, Gloucester; Mr. Harrison, Collumpton; Dr. Perkins, Manchester; Mr. Walker, Newport; Miss Hyde, Portsmouth; Clerk, Hartlepool Union; Medicus, London; Secretary, Hants County Asylum; Marmion, London; Medicus, Lancashire; B., Wandsworth-common; Alpha, London; Practice, London; F., Hull; Stethoscope, London; Thesis, Golden-square; Oxon., London; E., Blackfriars-road; B. M. S., London; Requisition, London; Medicus, Gateshead-on-Tyne; M.D., Birmingham; Medicus, Rutland; Medicus, Ambleside; Yorks, London; Q. G., London; Gamma, London; Colonial, London; M.B., Green-lanes; Mare, London; L. P., London; May, London; L. H. T., Bourton; Dr. X., London; Beta, London; North Sea, London; Medicus, Dublin; L.R.C.P., London; Eucalyptus, London; L. F., London; X. L., London; Deloraine, London; W. S., Edmonton; T. N. G., Worthing; Executors, London; C. H., Sheffield; Nolens, London; E. F., London; Miss L., London; A. B., Holland-park; Beta, Essex; A. B. C., London.

Hull Daily Mail, Weekly Free Press and Aberdeen Herald, Hertfordshire Mercury, Cork Examiner, Surrey Advertiser, Mining Journal, Madras Mail, Birkenhead and Cheshire Advertiser, Reading Mercury, Christian Commonwealth, City Press, &c., have been received.

Medical Diary for the ensuing Week.

Monday, September 2.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, daily at 10 A.M.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1.30 P.M., and each day at the same hour.
CHELSEA HOSPITAL FOR WOMEN.—Operations, 2.30 P.M.; Thursday, 2.30.
ST. MARK'S HOSPITAL.—Operations, 2.30 P.M.; Tuesday, 2.30 P.M.
HOSPITAL FOR WOMEN, SOHO-SQUARE.—Operations, 2 P.M., and on Thursday at the same hour.
METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.
ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.
CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M., and each day in the week at the same hour.

Tuesday, September 3.

GUY'S HOSPITAL.—Operations, 1.30 P.M., and on Friday at the same hour. Ophthalmic Operations on Monday at 1.30 and Thursday at 2 P.M.
ST. THOMAS'S HOSPITAL.—Ophthalmic Operations, 4 P.M.; Friday, 2 P.M.
CANCER HOSPITAL, BROMPTON.—Operations, 2 P.M.; Saturday, 2 P.M.
WESTMINSTER HOSPITAL.—Operations, 2 P.M.
WEST LONDON HOSPITAL.—Operations, 2.30 P.M.
ST. MARY'S HOSPITAL.—Operations, 1.30 P.M. Consultations, Monday, 2.30 P.M. Skin Department, Monday and Thursday, 9.30 A.M. Throat Department, Tuesdays and Fridays, 1.30 P.M. Electro-therapeutics, same days, 2 P.M.

Wednesday, September 4.

NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 10 A.M.
MIDDLESEX HOSPITAL.—Operations, 1 P.M.
ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1.30 P.M.; Saturday, same hour. Ophthalmic Operations, Tuesday and Thursday, 1.30 P.M. Surgical Consultations, Thursday, 1.30 P.M.
ST. THOMAS'S HOSPITAL.—Operations 1.30 P.M.; Saturday, same hour.
LONDON HOSPITAL.—Operations, 2 P.M. Thursday & Saturday, same hour.
SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations, 2.30 P.M.
GREAT NORTHERN CENTRAL HOSPITAL.—Operations, 2 P.M.
UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.; Saturday, 2 P.M. Skin Department, 1.45 P.M.; Saturday, 9.15 A.M.
ROYAL FREE HOSPITAL.—Operations, 2 P.M., and on Saturday.
KING'S COLLEGE HOSPITAL.—Operations, 3 to 4 P.M.; Friday, 2 P.M.; Saturday, 1 P.M.
CHILDREN'S HOSPITAL, GREAT ORMOND-STREET.—Operations, 9.30 A.M.; Surgical Visits on Wednesday and Saturday at 9.15 A.M.

Thursday, September 5.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M. Surgical Consultations, Wednesday, 1.30 P.M. Ophthalmic Operations, Friday, 1.30 P.M.
CHARING-CROSS HOSPITAL.—Operations, 2 P.M.

Friday, September 6.

ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.

Saturday, September 7.

MIDDLESEX HOSPITAL.—Operations, 2 P.M.

SUBSCRIPTION.

POST FREE TO ANY PART OF THE UNITED KINGDOM.

One Year	£1 12 6	Six Months	£0 16 3
TO CHINA AND INDIA		One Year	1 16 10
TO THE CONTINENT, COLONIES, AND UNITED STATES		Ditto	1 14 8

Post Office Orders and Cheques should be addressed to The Publisher, THE LANCET Office, 423, Strand, London, and crossed "London and Westminster Bank, St. James's-square."

ADVERTISING.

Books and Publications (seven lines and under)	£0 5 0
Official and General Announcements	0 5 0
Trade and Miscellaneous Advertisements	0 4 6
Every additional Line	0 0 6
Front Page	per Line 0 1 0
Quarter Page	1 10 0
Half a Page	2 15 0
An Entire Page	5 5 0

The Publisher cannot hold himself responsible for the return of testimonials, &c., sent to the office in reply to advertisements; copies only should be forwarded.

NOTICE.—Advertisers are requested to observe that it is contrary to the Postal Regulations to receive at Post Offices letters addressed to initials only.

An original and novel feature of "THE LANCET General Advertiser" is a special Index to Advertisements on page 2, which not only affords a ready means of finding any notice, but is in itself an *additional* advertisement.

Advertisements (to ensure insertion the same week) should be delivered at the Office not later than Wednesday, accompanied by a remittance.

Answers are now received at this Office, by special arrangement, to advertisements appearing in THE LANCET.

Terms for Serial Insertions may be obtained of the Publisher, to whom all letters relating to Advertisements or Subscriptions should be addressed.

Advertisements are now received at all Messrs. W. H. Smith and Son's Railway Bookstalls throughout the United Kingdom and all other Advertising Agents.

Agent for the Advertisement Department in France—J. ASTIER, 66, Rue Caumartin, Paris.